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# ENVIRONMENTAL ASSESSMENT BOARD

VOLUME: 117

DATE: Wednesday, June 21st, 1989

BEFORE: M.I. JEFFERY, Q.C., Chairman

E. MARTEL, Member

A. KOVEN, Member

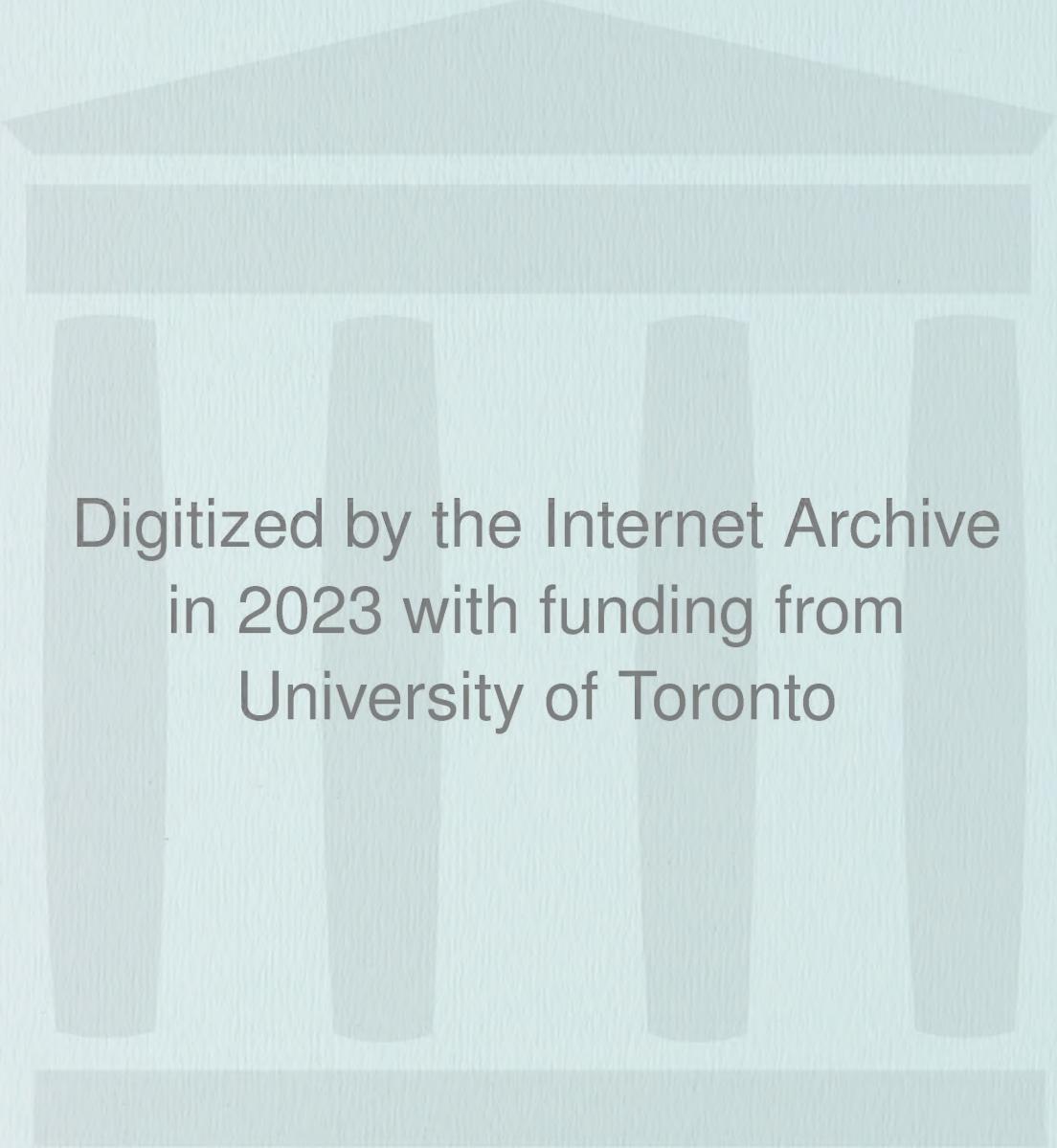


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HEARING ON THE PROPOSAL BY THE MINISTRY OF NATURAL  
RESOURCES FOR A CLASS ENVIRONMENTAL ASSESSMENT FOR  
TIMBER MANAGEMENT ON CROWN LANDS IN ONTARIO

IN THE MATTER of the Environmental  
Assessment Act, R.S.O. 1980, c.140;

- and -

IN THE MATTER of the Class Environmental  
Assessment for Timber Management on Crown  
Lands in Ontario;

- and -

IN THE MATTER of an Order-in-Council  
(O.C. 2449/87) authorizing the  
Environmental Assessment Board to  
administer a funding program, in  
connection with the environmental  
assessment hearing with respect to the  
Timber Management Class  
Environmental Assessment, and to  
distribute funds to qualified  
participants.

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Hearing held at the Ramada Prince Arthur  
Hotel, 17 North Cumberland St., Thunder  
Bay, Ontario, on Wednesday, June 21st,  
1989, commencing at 9:00 a.m.

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VOLUME 117

BEFORE:

MR. MICHAEL I. JEFFERY, Q.C.	Chairman
MR. ELIE MARTEL	Member
MRS. ANNE KOVEN	Member



(i)

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NORTHWESTERN ONTARIO  
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I N D E X   O F   P R O C E E D I N G S

<u>Witness:</u>	<u>Page No.</u>
<u>J. JOSEPH CHURCHER,</u> <u>EDWARD ISKRA,</u> <u>ROBERT L. GALLOWAY,</u> <u>ROBERT A. CAMPBELL,</u> <u>MICHAEL EDWIN BUSS,</u> <u>PETER PHILLIP HYNARD,</u> <u>CINDY STERN KRISHKA,</u> <u>STEPHEN NICHOLSON, Resumed</u>	19624
Continued Cross-Examination by Ms. Seaborn	19624
Re-Direct Examination by Mr. Freidin	19661



1            ---Upon commencing at 9:10 a.m.

2            THE CHAIRMAN: Thank you. Be seated  
3            please.

4            Ms. Seaborn, just before we recommence  
5            with your examination, the Board would just like to  
6            allude to a couple of the procedural matters raised by  
7            Ms. Cronk yesterday.

8            We just had a brief opportunity to  
9            discuss those matters and the Board has not been able  
10           to contact Mr. Turkstra yet either, so we don't know  
11           what his availability would be as to the question of  
12           whether or not additional parties would want to call  
13           Dr. Baskerville as their own witness.

14           We feel that Mr. Turkstra should be a  
15           party to those discussions simply because he will be  
16           acting for the Board as the Board's counsel in  
17           connection with the Board calling Dr. Baskerville and  
18           will also be acting, in a sense, for Dr. Baskerville.

19           And just so that we have in our minds,  
20           Ms. Cronk, the issue straight, your concern as the  
21           Board understands it, was that Dean Baskerville's  
22           witness statement was due towards the end of August?

23           MS. CRONK: That's my understanding, Mr.  
24           Chairman.

25           THE CHAIRMAN: And how does that impinge

1 necessarily upon the fact that another party may wish  
2 to call him at some further point down the road?

3 MS. CRONK: It doesn't at all, it is just  
4 a practical matter that we were aware was happening in  
5 tandem. The substantive concern that's being raised is  
6 whether it is appropriate at all for another party to  
7 be calling Dean Baskerville as a witness in the face of  
8 a decision by the Board to have Dean Baskerville appear  
9 in the role of a neutral witness to speak to specified  
10 issues. And it may well be, Mr. Chairman, you will  
11 receive submissions as to the propriety of that.

12 Whether or not a decision on that issue  
13 is reached, it may be that the Board -- our thinking  
14 was that if the Board was aware that one or more  
15 parties was considering calling Dean Baskerville, the  
16 Board might itself wish to reconsider the timing of  
17 which Dean Baskerville was called on behalf of the  
18 Board or the implications of doing it at all.

19 So we wanted to raise the issue so the  
20 Board was aware of the information that was available  
21 to us so that if you considered it appropriate, you  
22 could inform the parties of the thinking on the matter.

23 I raise the timing of the witness  
24 statement only because if a decision, for example, were  
25 to be reached that Dean Baskerville's evidence on

1       behalf the Board were to be delayed, one wouldn't want  
2       them spending the summer preparing the witness  
3       statement.

4                   THE CHAIRMAN: Okay. Thank you for that  
5       clarification.

6                   Well, the Board certainly agrees that  
7       submissions may want to be made by parties concerning  
8       the issue as to whether Dean Baskerville should be  
9       called in the two capacities, as the Board witness and  
10      as a witness for another party.

11                  That will take perhaps a little bit of  
12      time to dispose of, if you will, and all parties should  
13      have notice of the issue being discussed and, as I  
14      mentioned, we would want Mr. Turkstra to be present at  
15      the time of those submissions as well.

16                  Whether that can be accomplished in the  
17      next week is doubtful and it is doubtful because we  
18      don't have any indication at this time as to whether  
19      other parties want to call Dean Baskerville.

20                  What we are suggesting the Board would do  
21      is, over the next three or four days, send out a notice  
22      to all parties on the full-time correspondence list  
23      requesting an indication as to whether any party wishes  
24      to call Dean Baskerville as their own witness, and then  
25      further indicate in the notice that submissions will be

1       made, or a time for submissions to be made will be set  
2       to deal with that issue.

3               Now, it comes down to the timing, as to  
4       when we can set that time, bearing in mind that we are  
5       rising at the end of next week for the month of July  
6       and the first week of August. It is doubtful, frankly,  
7       that we can hold that session prior to coming back in  
8       August. I just don't see how we can physically  
9       accommodate that.

10              So it will likely be, I suggest, at the  
11       opening of the session in August.

12              MS. CRONK: Thank you, Mr. Chairman.

13              THE CHAIRMAN: Now, with respect to your  
14       other concern about the timing of the witness  
15       statements for OFIA and the time for submitting  
16       interrogatories.

17              The first issue we discussed this morning  
18       may impinge upon that slightly, if the Board were to  
19       reverse its position on the calling of Dean  
20       Baskerville.

21              But it seems to us that, firstly, there  
22       would be no difficulty, in the Board's view, of  
23       indicating that the time for submitting  
24       interrogatories, which has been set at 40 days, would  
25       remain the same with there being no obligation on OFIA

1 to respond to the interrogatories until the end of the  
2 40-day period, until the end of the 40-day period  
3 meaning you would have --

4 MS. CRONK: I am sorry, sir?

5 THE CHAIRMAN: Sorry, within 15 days from  
6 the end--

7 MS. CRONK: Thank you.

8 THE CHAIRMAN: --from the end of the  
9 40-day period, that's what I meant to say. So you  
10 would not have to have your expert witnesses and  
11 consultants available through the whole period.

12 MS. CRONK: That will help considerably,  
13 Mr. Chairman. Thank you.

14 THE CHAIRMAN: Now, with respect to the  
15 fact that that can bring it to a maximum of 55 days  
16 with the witness statement to be delivered no sooner  
17 than 60 days before the calling of the panel, we don't  
18 feel that would necessarily be a problem with the first  
19 panel because it is unlikely that your case would  
20 commence immediately following the Ministry's case.

21 Why? Because we are suggesting that Dean  
22 Baskerville would probably be slotted in at the end of  
23 the Ministry's case. That would probably take, we  
24 don't know for sure, but probably a couple of weeks in  
25 any event.

1                     Depending on when the Ministry's case  
2     finishes, we might be getting close to the end of the  
3     year, including Dean Baskerville's appearance, if he  
4     appears at that time. So we feel that there will  
5     probably be sufficient time for you to submit your  
6     witness statements at least 60 days before the end of  
7     the Ministry's case, in any event.

8                     We are hoping perhaps it could be  
9     submitted before that, if at all possible, then there  
10    would be at least 60 days before the end of the  
11    Ministry's case and then the appearance of Dean  
12    Baskerville.

13                    There may be holidays, in any event, in  
14    that period as well and there is a possibility,  
15    depending on what happens in September, that we may  
16    slot in an additional satellite hearing at that time as  
17    well.

18                    MS. CRONK: Thank you. That is very  
19    helpful, Mr. Chairman.

20                    THE CHAIRMAN: I think you will find  
21    there is sufficient time to do all of that and the  
22    Board still has to conduct a scoping session as well  
23    with enough time between the end of the scoping session  
24    and the actual witness statement.

25                    Now, we will take a good look at the

1 procedural ruling we made in September to make sure  
2 that what we are saying here will also apply to other  
3 parties down the road in terms of not having to have  
4 their experts available throughout the full period of  
5 the 40 days.

6 MS. CRONK: I should say, Mr. Chairman,  
7 the reason we raised it yesterday, quite apart from the  
8 immediate anticipation of the practical difficulty, we  
9 understood at the time that the Board made that order  
10 in September that if counsel felt any element of it,  
11 with respect, might be improved upon in a practical  
12 sense, we were to bring that to the attention of the  
13 Board.

14 THE CHAIRMAN: We appreciate that.

15 MS. CRONK: Should we find that in  
16 future, I take it we are to bring that to the attention  
17 of the Board?

18 THE CHAIRMAN: We want those procedural  
19 rulings in a practical sense. If there is any  
20 difficulty, we would like to know about it and, if  
21 required, we will issue an amendment to that ruling, if  
22 necessary.

23 MS. MURPHY: If I might add an  
24 observation from our experience.

25 Particularly early in the hearing, when

1       you look at the procedural hearing, one of the things  
2       we found very difficult was where the order requires a  
3       person to do something 60 days before an event that has  
4       no date, it makes it very difficult. It is impossible  
5       to do something 60 days before a date that is  
6       unascertainable.

7                   THE CHAIRMAN: We made -- we realized  
8       that when we made that particular ruling, but we wanted  
9       to not have a large gap between the end of your case  
10      and the commencement of the Industry's case, not  
11      knowing at that time that we might be calling a witness  
12      of our own inbetween, et cetera.

13                  So we had to somehow give the parties  
14      enough notice to have that witness statement submitted  
15      in enough time, so we just picked an arbitrary period  
16      of 60 days before your case, knowing full well we  
17      wouldn't know when the end of your case was coming.

18                  MS. MURPHY: It is an observation that  
19       may be kept in mind when we start dealing with things  
20       serially and things like that.

21                  THE CHAIRMAN: We will keep that in mind.  
22       We realize it is difficult for the parties to ascertain  
23       when they are going to finish, but when it gets closer  
24       to the event, we can adjust the matters accordingly.

25                  MS. CRONK: Thank you very much, Mr.

1 Chairman.

2 THE CHAIRMAN: Ms. Seaborn?

3 MS. SEABORN: Good morning, members of  
4 the panel.

5 J. JOSEPH CHURCHER,  
6 EDWARD ISKRA,  
7 ROBERT L. GALLOWAY,  
8 ROBERT A. CAMPBELL,  
9 MICHAEL EDWIN BUSS,  
PETER PHILLIP HYNARD,  
CINDY STERN KRISHKA,  
STEPHEN NICHOLSON, Resumed

10 CONTINUED CROSS-EXAMINATION BY MS. SEABORN:

11 Q. Mr. Buss, I would like to start with  
12 a few questions for you. Your evidence was directed at  
13 explaining the potential environmental effects of  
14 mechanical and manual tending on the aquatic,  
15 terrestrial and socio-economic environment?

16 MR. BUSS: A. That's correct.

17 Q. And you specifically excluded from  
18 your evidence any discussion of potential effects of  
19 herbicide use?

20 A. That is also correct.

21 Q. And with respect to the potential  
22 effects of tending on the aquatic environment, your  
23 evidence was that there is very little reported  
24 literature; is that correct?

25 A. Yes, separating the effects of

1 tending from other forest management activities. Most  
2 of the information that's available deals with harvest  
3 and renewal.

4 Q. Thank you. And you also stated in  
5 your evidence that in terms of preventing or mitigating  
6 effects to the aquatic environment you rely on the  
7 application of the Timber Management Guidelines for the  
8 Protection of Fish Habitat?

9 A. Yes.

10 Q. And in previous panels the Board has  
11 heard evidence as to the provisions of the Fish Habitat  
12 Guidelines and their application across the area of the  
13 undertaking. Are you aware generally of that evidence?

14 A. Generally, yes.

15 Q. You are aware that areas of concern  
16 would be identified through the application of the  
17 guidelines prior to harvest and renewal prescriptions?

18 A. Yes.

19 Q. So that any harvesting that would  
20 occur in the vicinity of a waterbody could only be  
21 undertaken in accordance with the provision of the Fish  
22 Habitat Guidelines?

23 A. Yes, that's correct.

24 Q. Now, if as a result of the  
25 application of the guidelines an area of concern is

1 identified resulting in no harvest, then there would be  
2 no reason to conduct tending operations in that  
3 reserve; would you agree with that?

4 A. Yes, that's correct.

5 Q. Could you turn please to 366 of Panel  
6 12 statement of evidence, which 366 is Volume II.

7 MS. CRONK: What page?

8 MS. SEABORN: Page 366.

9 Q. Do you have that in front of you, Mr.  
10 Buss.

11 MR. BUSS: A. Yes, I do.

12 Q. The fourth line down from the top of  
13 the page starts with the word 'consistent'. Do you see  
14 that?

15 A. Yes.

16 Q. And it says:

17 "Consistent with these guidelines,  
18 salvage cutting is not carried out in  
19 certain shoreline areas, such as those  
20 adjacent to coldwater fish habitat."

21 And then you go on to give an example and  
22 it says:

23 "For example, timber which has been  
24 damaged by insects in a reserve on a lake  
25 trout lake would not normally be

2 Now, would you agree with me that going  
3 into a reserve to salvage timber would be an exception  
4 to the application of the Fish Habitat Guidelines?

5                           A. You are talking about a salvage cut  
6                           of the insect damaged trees that are in a reserve on a  
7                           lake trout lake?

8 Q. That's right.

19 So the kind of cut that might -- could  
20 feasibly take place or hypothetically take place would  
21 be in terms of a selection cut. Because you don't want  
22 to be removing select trees, it wouldn't be a large  
23 harvest.

1 that's destroyed by insects and it may be that for  
2 forest purposes one would want to go in there and  
3 salvage the standing trees.

4                   What I am suggesting is that for the  
5 purposes of water quality there may be another reason  
6 to have that reserve left as it is without going in and  
7 salvaging. Would you agree with that?

8                   A. Yes.

9                   Q. And that that reserve would be there  
10 as a value that still affords water quality protection?

11                  A. Yes, that's correct. If you thought  
12 that the harvest operation or salvage operation was  
13 going to damage soil or cause potential erosion or  
14 anything of that nature, then certainly the terms of  
15 the reserve would still be implied or imposed.

16                  Q. Okay.

17                  Q. Mr. Nicholson, could you turn to page  
18 166 of the Panel 13 witness statement. It is Exhibit  
19 604A.

20                  MR. NICHOLSON: A. It is the one  
21 identified as buffer zones?

22                  Q. That's right. And these buffer zones  
23 are identified as Appendix 4 to MNR's policy FRO  
24 410-10; correct?

25                  A. That's correct.

1                   Q. And these guidelines were developed  
2                   jointly by MOE and MNR in the mid-1980s?

3                   A. Yes.

4                   Q. And could you confirm for me that  
5                   when a spray permit is issued by MOE, a copy of those  
6                   buffer zones are generally included with the permit?

7                   A. The permit being issued by MOE?

8                   Q. Yes.

9                   A. Yes.

10                  Q. And it is my understanding that  
11                  adherence to these buffer zones are mandatory when  
12                  conducting a spray of herbicides and chemical  
13                  insecticides?

14                  A. Mandatory to within the limit of our  
15                  technical capability.

16                  Q. What do you mean 'within the limit of  
17                  your technical capability'?

18                  A. We adhere to the buffer zones, but if  
19                  there was an occurrence where there is an area sprayed  
20                  on a buffer zone inadvertently that would be, I guess,  
21                  against our policy, if you will. So from that point of  
22                  view we attempt to adhere to it, it is mandatory, but  
23                  those occurrences may happen from time to time.

24                  Q. I am talking about inadvertence  
25                  aside. I am saying generally the thrust is that these

1 guidelines are to be followed in the plan of an aerial  
2 spray?

3 A. That's correct.

4 Q. And the purpose of the buffer is  
5 essentially in terms of water quality, to ensure that  
6 waterbodies are not sprayed; would you agree with that?

7 A. Just looking at waterbodies only?

8 Q. Yes.

9 A. And only those waterbodies deemed --  
10 shown here as significant or sensitive.

11 Q. And it is my understanding the way  
12 these guidelines work is that the idea is that a spray  
13 is permitted up to the edge of the buffer, so that if  
14 there is any drift, that would be caught by the buffer  
15 and there wouldn't be any spray over the waterbody?

16 A. That's the general purpose, yes.

17 Q. And that's the purpose of not having  
18 the spray up to the water's edge because you don't have  
19 that buffer to catch the drift in the event there is a  
20 drift?

21 A. It is my understanding even if there  
22 was a direct application on the water that there would  
23 be no significant environmental impact of that but, as  
24 always, on the side of caution, we put these buffer  
25 zones in place.

1                   Q. I am not suggesting any adverse  
2 effects per se, we will be dealing with that whole  
3 topic in August, I am looking at the moment at the  
4 procedure for the purpose of the guidelines.

5                   A. The purpose of them is to minimize in  
6 an effort to prevent any movement of the spray into a  
7 no-spray area.

8                   Q. And within the permitting system for  
9 forestry use of herbicides there is no registered use  
10 patterns for application on water; correct?

11                  A. Say that again, please?

12                  Q. Maybe Mr. Iskra --

13                  A. No, just repeat your question. I  
14 didn't catch it all.

15                  Q. All I am suggesting is within the  
16 permitting system for forestry use of herbicides you  
17 don't give a permit for use of a herbicide on a  
18 waterbody?

19                  A. Not for forestry purposes, no.

20                  Q. Right. Now, Mr. Buss, perhaps you  
21 can help me in this area because I am going to be  
22 dealing again with the Fish Habitat Guidelines.

23                  Could you have in front of you, please,  
24 Exhibit 304 which is the policy that accompanies the  
25 Fish Habitat Guidelines.

1 MR. BUSS: A. Yes, I have those.

2 Q. Could you turn to page 2 of the  
3 policy.

4 A. Yes.

5 Q. Now, page 2 of the policy lists the  
6 waters to which the guidelines would be applied. Do  
7 you see that?

8 A. Yes.

9 Q. It is under No. 1, Application?

10 A. Yes, I have that.

11 Q. Now, I am not going to go into this  
12 in detail, the Board has heard a large amount of the  
13 testimony with respect to both this policy and the  
14 guidelines themselves.

15 Now, just looking at this policy, I would  
16 like you to also have a look at one of MOE's  
17 interrogatories which is filed as 610 and it is  
18 Question 23. Do you have that?

19 A. Yes, Question 2.

20 Q. And you will see that the  
21 interrogatory that we asked was:

22 "Please list other values which would  
23 preclude aerial spraying?"

24 And the response directed us to the other  
25 values that were identified in a document entitled:

1       Background Information, Other Resource Features, Land  
2       Uses and Values which is Exhibit 5A, and then the last  
3       paragraph of the answer said:

4                 "As you recall, that list was developed  
5                 in conjunction with the Ministry of the  
6                 Environment and includes the values which  
7                 were located within the buffer zones for  
8                 aerial application of pesticides  
9                 discussed in Panel 13.".

10               Now, I just want to briefly look at the  
11       values that are identified in Exhibit 5A as the  
12       response directs us to those values. . .

13               MS. SEABORN: And, Mr. Chairman, those  
14       values are found in Attachment 2 to Exhibit 5A and it  
15       is the seventh page of my copy.

16               Q. Do you have that in front of you, Mr.  
17       Buss?

18               MR. BUSS: A. Yes, I do.

19               Q. Now, under the fisheries there is a  
20       list of fish communities by lake stream, bait fish  
21       lakes, spawning areas, nursery areas, migration areas,  
22       headwater lakes, identified assets and sensitive lakes.

23               Would you agree with me that in a general  
24       way the values that are listed in Exhibit 5A would be  
25       covered by the areas that are listed in the fish

1 habitat policy which is filed as Exhibit 304 and that  
2 is the list where -- that's under No. 1:

3 "The guidelines shall be applied to the  
4 following waters..."

5 A. Yes, I think in a general way they  
6 cover the same areas.

7 Q. Thank you. And would you agree that  
8 if the application of the fish guidelines resulted in  
9 an area of concern, then a buffer would be in place for  
10 the purpose of defining the limit of an area spray?

11 A. Under which guidelines, the ones that  
12 come with the permit or the ones described in the  
13 Ministry's Fisheries Habitat Guidelines?

14 Q. What I am suggesting is that if you  
15 had an area of concern identified through the  
16 application of the Fish Habitat Guidelines, then there  
17 would also be a buffer that would be in place for the  
18 purpose of defining the limits of your spray?

19 A. The guidelines from the fisheries  
20 management -- the Fisheries Habitat Guidelines don't  
21 specifically talk or specifically relate to the  
22 application of chemicals.

23 It is my understanding that those  
24 guidelines that Mr. Nicholson just referred, for  
25 example, what he referred to in that question are

1 specifically designed to deal with the application of  
2 chemicals. There is overlap, of course, because we are  
3 dealing -- talking about the same area on the land. So  
4 with that in mind, would you repeat the question,  
5 please?

6 Q. Let me ask something else first.

7 Given that there is unlikely to be any harvesting in an  
8 area of concern that's created pursuant to the Fish  
9 Habitat Guidelines; correct?

10 A. There can be harvesting.

11 Q. In certain situations?

12 A. Right.

13 Q. But often there is unlikely to be  
14 harvesting in that reserve that's created under the  
15 Fish Habitat Guidelines?

16 A. Or some harvest of some sort, yes.

17 Q. In a situation where you are not  
18 harvesting within a reserve, it would not be necessary  
19 to apply any aerial herbicide within that reserve  
20 either?

21 A. That's correct.

22 Q. So for the purposes of defining the  
23 limits of your aerial spray, you would essentially be  
24 taking the buffer zone that you have set up under the  
25 Fish Habitat Guidelines as the limit of your spray

1       irrespective of what's in the buffer zone recommended  
2       for aerial application?

3                   THE CHAIRMAN: Why couldn't you have a  
4       larger buffer zone under the buffer zone guidelines;  
5       that is, larger than the buffer zone that might be  
6       created through an area of concern under the Fish  
7       Habitat Guideline?

8                   MS. SEABORN: I completely agree with  
9       that, Mr. Chairman. I was going to get to that point  
10      with Mr. Buss. I suggest that is quite common.

11                  I am thinking of the opposite situation  
12      where you may have a reserve -- sorry, the area of  
13      concern created under the Fish Habitat Guidelines that  
14      is wider than the buffer zone guidelines.

15                  Q. And, in that situation, you would  
16      apply the area of concern under the Fish Habitat  
17      Guidelines rather than the spray guidelines?

18                  MR. BUSS: A. I think the approach then,  
19      from the Ministry's standpoint, is to use whichever is  
20      more conservative in this case. And I am not sure, but  
21      I would have to look at it to see whether there would  
22      be a wider one under the fisheries guidelines as there  
23      would be under the spray buffer guidelines, so...

24                  Q. So it would be your position that you  
25      would choose the most conservative one?

1 A. Yes.

2 Q. And could you just refer to page 89  
3 of Exhibit 604C which is the ESSA Report.

4 A. Yes, I have page 89.

5 Q. And the only comment I wanted to  
6 bring to the Board's attention at this stage was that  
7 in a discussion of potential effects of herbicides in  
8 the ESSA Report, on the first full paragraph on page  
9 89, it states:

10 "In addition, the Ministry's Timber  
11 Management Guidelines for the Protection  
12 of Fish Habitat provide for the use of  
13 buffer zones in areas of concern (with  
14 respect to fish habitat). Consequently,  
15 harvesting within many riparian areas  
16 does not occur or is greatly restricted.  
17 In such cases there is usually no  
18 rationale for herbicide use for the  
19 purposes of silviculture. Thus even  
20 ground-based application of herbicides  
21 will not have any effects on riparian  
22 vegetation."

23 That statement is essentially consistent,  
24 I believe, with the answer you earlier gave to me--

25 A. Yes.

1 Q. --would you agree?

2 MR. NICHOLSON: A. I think it is worth  
3 noting these buffer zones, as they were designed, were  
4 considered as minimums and if there is other concerns,  
5 such as Mr. Buss has been talking about, then they  
6 would supersede these.

7 Q. Thank you. And, Mr. Buss, just a  
8 couple more questions on this. Would you agree that in  
9 the situation where the fish guidelines permit a 50 per  
10 cent cut on the shoreline, that area wouldn't normally  
11 be aerially treated because in that event the aerial  
12 spray buffers would prevent spraying to the water's  
13 edge?

14 MR. BUSS: A. Yes, that's my  
15 understanding.

16 Q. Your option in that situation would  
17 be a ground herbicide application or manual tending?

18 A. Yes. In many cases we would still be  
19 looking at the effect of that tending. If it might  
20 impinge on the value we were trying to protect, we may  
21 allow harvest but if through some other subsequent  
22 activity of renewal or tending -- then we probably  
23 would restrict that.

24 Q. And would you confirm for me that all  
25 waterbodies that require protection through the Fish

1           Habitat Guidelines will also receive protection from  
2           the aerial application of pesticides through the buffer  
3           zone guidelines?

4                   A. Areas that would be identified by  
5                   fisheries -- I am trying to paraphrase your question.  
6                   Areas that would be identified in the fisheries  
7                   guidelines would also be protected by the buffer zones  
8                   by aerial spraying?

9                   Q. That's right.

10                  A. Yes.

11                  Q. And, Mr. Churcher, I note looking at  
12                  the chart on page 166 that there is no buffer zones for  
13                  BT; is that correct?

14                  MR. CHURCHER: A. Yes, that's correct.

15                  Q. And would you agree with me that from  
16                  a planning point of view, when you are putting together  
17                  a spray program, it is a little easier dealing with BT,  
18                  you don't have to worry about buffer zones, per se,  
19                  when you are looking at your areas of operations?

20                  A. Yes, that would be a fair statement.

21                  Q. And I note as well that under 'other  
22                  than herbicides' -- which are essentially chemical  
23                  insecticides, correct?

24                  A. Yes, that's right.

25                  Q. That those buffer zones are two times

1 the buffer zones for herbicides?

2 A. Yes.

3 Q. Mr. Buss, in your evidence-in-chief  
4 when you were describing how tending is a component of  
5 almost every harvest operation in the Great Lakes/St.  
6 Lawrence region. Do you recall that evidence?

7 MR. BUSS: A. Yes.

8 Q. And you were discussing your view of  
9 the area of concern planning process and you explained  
10 that the results that you could expect in the field  
11 were very much dependent on how people applied  
12 foresters' prescriptions. Would be that be a fair  
13 summary?

14 A. Yes.

15 Q. And you gave the example of providing  
16 shelter for deer and said that while you had said on  
17 paper that you wanted to protect the hemlock trees for  
18 deer shelter, when the logger went out and felled the  
19 tree there was a problem?

20 A. That's correct.

21 Q. And you said that had your  
22 instructions been more specific, the logger could have  
23 girdled that tree which would have effectively removed  
24 the tree from the stand, but would have kept the deer  
25 cover?

1                   A. Yes. The reference there was really  
2                   to instructions to the marking crew that actually mark  
3                   the timber. The logger -- it wasn't up to the logger,  
4                   he could make any choice he wanted after it was marked  
5                   the way it was. It could have been marked specifically  
6                   for one type of felling or another.

7                   Q. I'm sorry, right. Now, you made a  
8                   mention to be concerned about adherence to rules. And  
9                   What I'm suggesting is, in the example you gave us,  
10                  isn't this an example one where you could say that had  
11                  there been a rule about how you marked trees for the  
12                  purposes of protecting deer shelter, that this sort of  
13                  thing wouldn't happen?

14                  A. The implication where that dealt with  
15                  rules was saying that, to make a rule that in every  
16                  case where you are applying that activity, that tending  
17                  activity to all parts of the areas of the undertaking  
18                  might not be applicable in another area because you  
19                  would have people going evaluating whether they need to  
20                  apply this rule and, in fact, they weren't doing that  
21                  kind of tending.

22                  In other words, it's a checklist, it's  
23                  laborious going through all of these and evaluating  
24                  each of those situations that may not fit at all.

25                  Q. Well, I don't want you to

1 misinterpret me to the extent that I am not suggesting  
2 that we have rules for everything in the field. What  
3 I'm suggesting is that in that particular example you  
4 gave, it struck me that that was a perfect example  
5 where, if it was set out in your prescription as to how  
6 you should protect deer shelter, then in any other  
7 management unit where that was an objective, you would  
8 be able to prevent that sort of incident of the marker  
9 happening again?

10                   A. Yes, you could do that and  
11 probably -- there isn't a set out rule you, but when we  
12 deal with the tree markers in the courses now that we  
13 hold for them where we have an opportunity to give them  
14 background in order to see where we are going with the  
15 prescription.

16                   What it really comes down to is how this  
17 tree marker views the situation, in a given situation  
18 and it may be that a tree could be removed and also it  
19 could be that the tree, if it had an economic value,  
20 that there was a possibility of getting it out of the  
21 stand without causing damage, they could do it.

22                   So it's kind of -- it's trying to make  
23 this rule something that the marker uses, it's in his  
24 brain and he views the situation with, rather than  
25 something where he comes in and says: Well, you can't

1 cut trees here.

2 Q. It's a question of that sort of  
3 operation becoming normal practice and having the  
4 marker have that sort of mind set?

5 A. That's correct, exactly.

6 Q. Mr. Nicholson, could you have a look  
7 at Exhibit 640 which was the number of recordable and  
8 reportable incidents on MNR pesticide operations in the  
9 area of the undertaking.

10 You introduced this exhibit, am I  
11 correct, exhibit 640?

12 MR. NICHOLSON: A. I don't know if I  
13 introduced it directly, but I'm familiar with it.

14 Q. Okay, that's fine. Could you turn to  
15 page 6, please. Now, under Cochrane, and I'm just  
16 using this as an example, the last paragraph it says:

17 "MOE was informed. No adverse  
18 environmental impacts were noted."

19 Do you see that?

20 A. Yes, I do.

21 Q. Do you know whether -- was that an  
22 assessment that was done by MOE or an assessment done  
23 by MNR?

24 A. That particular incident, I do not  
25 know if it was either MOE or MNR. Usually in a

1 situation like that, the standard procedure is that  
2 they go out together and take a look at it.

3 Q. The reason why I'm interested is that  
4 the next one down under -- sorry, on page 6, on the  
5 same page it talks about:

6 "A joint inspection resulted, but no  
7 major environmental damaged was  
8 expected."

9 And I'm wondering, looking at these two  
10 different comments, whether that means that in the  
11 second incident it would have been a joint MOE/MNR  
12 report whereas the one above it was done by either MNR  
13 or MOE?

14 A. That could well be one. One thing I  
15 think is worth noting is the significance of the size  
16 in those two incidents, and it could be either way.

17 Q. On the other examples - and won't I  
18 go through them all - there are a number of comments  
19 such "as no major environmental damage was noted".  
20 There is that comment under Kapuskasing twice or three  
21 times at least.

22 Would you know whether that was an  
23 evaluation done by MNR or by MOE?

24 A. Specifically, I wouldn't know.

25 MS. SEABORN: If I could just have a

1 moment, Mr. Chairman.

2                   Thank you, gentlemen. Those are all my  
3 questions, Mr. Chairman.

4                   THE CHAIRMAN: Thank you, Ms. Seaborn.

5                   MR. ISKRA: Mr. Chairman, I have one  
6 outstanding item in the form of an undertaking from  
7 yesterday on behalf of Ms. Bair-Muirhead and it's in  
8 response to questions regarding, in Sioux Lookout  
9 District, public notification.

10                  I contacted Sioux Lookout and they  
11 informed me that all the written and media notification  
12 for aerial herbicide operations was in English only.  
13                  The only Oji/Cree notification was in the form of a  
14 timber management plan notification in the monthly  
15 publication Wawatai.

16                  THE CHAIRMAN: Thank you.

17                  Mr. Freidin, are you going to require  
18 some time?

19                  MR. FREIDIN: 10:30?

20                  THE CHAIRMAN: Very well.

21                  MS. MURPHY: Mr. Chairman, I delivered a  
22 letter to the office about the community hearings and  
23 we haven't had a chance to distribute it to my friends,  
24 but you might want to review that in the meantime.

25                  THE CHAIRMAN: Okay, thank you.

1 MS. MURPHY: (handed)

2 ---On recessing at 9:50 a.m.

3 ---On resuming at 10:30 a.m.

4 THE CHAIRMAN: Thank you. Be seated,  
5 please.

6 Ms. Murphy, if you would like to deal,  
7 just before we start with Mr. Freidin's re-examination,  
8 with your letter, we can do that.

9 The Board essentially doesn't have any  
10 difficulty with the suggestions in your letter in that,  
11 as we interpret the letter, there will be the witnesses  
12 you are suggesting provided, and any members of the  
13 public will have an opportunity to question those  
14 witnesses on any concerns that have arisen.

15 We would suspend the rule about a witness  
16 not being allowed to confer with anybody under  
17 cross-examination. I think it's reasonable in the  
18 circumstances, particularly when they may have to  
19 inform themselves about events in other districts, et  
20 cetera.

21 And we are suggesting that with respect  
22 to the Ministry's earlier suggestion of perhaps holding  
23 an open house of some kind whereby there would be  
24 members of the Ministry there to answer questions  
25 outside of the formal satellite hearing session, the

1 Board has no objection to that, provided that it is  
2 conducted, if the Ministry wishes to have an open  
3 house, on the same day; not on a different day from the  
4 date that the hearing was going to be held.

5 We are suggesting that we would commence  
6 the hearing probably at two in the afternoon of the  
7 particular day and run through, depending on the number  
8 of people that wish to address the Board, through to  
9 the evening. We would probably, in any event, hold an  
10 evening session to at least catch those people who  
11 couldn't turn out during the day. But we do not want  
12 the Ministry to be holding an open house on a day other  
13 than the day of the hearing.

14 In other words, you would hold it, if you  
15 wished, in the morning and it would be open, in terms  
16 of the open house, until the hearing started.

17 The reason for that is specific; the  
18 Board does not want to convey to the public the idea  
19 that if they want to find out about this they should be  
20 there on more than one day. We think it's an  
21 inconvenience to the public, the idea is to make these  
22 satellite hearings as convenient and as accessible as  
23 possible to the public. We don't want any  
24 misinterpretation that if they show up on an  
25 alternative date, get the benefit of the Ministry's

1 open house, then perhaps they shouldn't show up for the  
2 satellite hearing, or vice versa.

3 MS. MURPHY: Well, Mr. Chairman, my  
4 advice from the people at the Ministry of Natural  
5 Resources who have a lot of experience in conducting  
6 open houses is that it would probably be best to have,  
7 as you suggest, the open house running the morning of  
8 that hearing, but they also suggest it would be wise as  
9 well to have something the previous evening, given that  
10 in the locations we are talking about many people  
11 prefer to come out in the evening rather than in the  
12 morning.

13 So that the proposal would have been to  
14 run the thing the afternoon and evening before, as well  
15 as the morning of the hearing, to give access to people  
16 who can't come during business hours. That is with  
17 specific experience.

18 THE CHAIRMAN: What happens if we are  
19 going to start this thing on a Monday, would you hold  
20 it on a Sunday?

21 MS. MURPHY: Well, I think the point is  
22 to hold it at some time in which people who have normal  
23 business hours would have an opportunity.

24 THE CHAIRMAN: Mind you, we could start  
25 the satellite hearing on the Tuesday.

1 MS. MURPHY: Correct.

2 THE CHAIRMAN: All right. I think the  
3 Board doesn't have any major objections if you held it  
4 the night before, for the reasons you are stating.

5 MS. MURPHY: And the next morning.

6 THE CHAIRMAN: And the next morning.

7 MS. MURPHY: Yes, that was the  
8 suggestion.

9 THE CHAIRMAN: Okay. And we would  
10 schedule the first satellite hearing for Dryden on the  
11 Tuesday commencing at 2:00 p.m. in the afternoon.

12 Now, we will be giving and issuing  
13 instructions for notice and the instructions will be  
14 coming from the Board to the Ministry to effect the  
15 notice under specified conditions.

16 We will also include within the notice --  
17 or, sorry, the directions for notice, the provision  
18 that a statement will be made in the notice that any  
19 party who wishes reference to a specific exhibit  
20 already exhibited in these proceedings shall notify the  
21 Board by such and such a date.

22 Again, it's not the intention to have all  
23 the exhibits present in Dryden, particularly the larger  
24 ones, and we don't want to run into a problem that  
25 somebody wants to refer to something and they are not

1 available. We think that if somebody wants to refer to  
2 something specifically, they should notify the Board in  
3 advance and then we will make sure it is on site.

4 Now, having said that, we expect the  
5 major general exhibits to be there, a small number of  
6 them, and these would include things like the  
7 Environmental Assessment Document itself, Exhibit 4,  
8 and perhaps we will have Mr. Mander confer with you as  
9 to which ones would fall into that category so that  
10 there will be some there.

11 MS. MURPHY: Yes. I think there are a  
12 number of sort of procedural and practical matters that  
13 we will have to deal with and I don't think it makes  
14 much sense to deal with it at this point and before the  
15 Board.

16 THE CHAIRMAN: Okay. Now, there is one  
17 other matter though that we do want to allude to and,  
18 that is - this is really a question for, Ms. Cronk -  
19 with respect to your association and the individual  
20 companies making up your association, if you recall,  
21 although you are acting for the associations, there  
22 were representations made at the outset that an  
23 individual company may also wish to deal specifically  
24 with certain matters on their own, presumably with  
25 their own representation.

1                   We do not expect the satellite hearings  
2                   to be that forum for individual companies which are  
3                   represented, because we are looking at this primarily  
4                   as a situation where members of the local public can  
5                   come and address the Board.

6                   For instance, we feel that if one of the  
7                   member companies of your association wish to present  
8                   their own evidence, they would probably do so  
9                   subsequent to your case and, depending on whether they  
10                  were in support or in opposition, perhaps some other  
11                  place in the proceedings.

12                  MS. CRONK: Mr. Chairman, I don't  
13                  anticipate that that is going to be a problem in any  
14                  respect. But having said that, you will appreciate  
15                  that depending upon the particular satellite location  
16                  it may be that there is some representation that may be  
17                  made to you by counsel on behalf of an individual  
18                  company of which I'm currently unaware.

19                  That is not the same thing as seeking to  
20                  introduce evidence, and I have no indication at all  
21                  that there would be any intention on the part of any  
22                  company to do that, either in advance of our case or at  
23                  any of these satellite locations. And if our  
24                  information changes, I will inform the Board.

25                  THE CHAIRMAN: Okay. And this may not

1 preclude, however, some independent companies who may  
2 not be represented by counsel at one of these satellite  
3 locations from utilizing the proceeding to raise  
4 questions as well. There may be a number of  
5 independent small companies out there that want to deal  
6 with certain questions as we reach those locations.

7 MS. CRONK: That is in part what I meant,  
8 Mr. Chairman. It may be that at one of those locations  
9 either there will be representatives of such companies  
10 in attendance, legal or otherwise.

11 THE CHAIRMAN: Right.

12 MS. CRONK: I can't speak to that, I  
13 don't know.

14 THE CHAIRMAN: Okay. The same would  
15 apply to some of the other groups that are formally  
16 represented by an association such as NOTOA and the  
17 OFAH and; that is to say, certainly members of those  
18 organizations individually could address the Board, but  
19 where they do have counsel presenting the bulk of the  
20 evidence at another particular location, we don't wish  
21 to get into a total repetition of that kind of thing.

22 MS. CRONK: I think the only caveat from  
23 our perspective that I would add to that, Mr. Chairman,  
24 is that at some of these locations if there are  
25 individuals who are in the employ of or associated with

1 various companies active in the area, they may in no  
2 way constitute persons who would be called as witnesses  
3 in the formal presentation of the case.

4 I would not have thought it the Board's  
5 intention to restrict the ability of people like that  
6 to come forward and speak their views.

7 THE CHAIRMAN: No. It isn't the Board's  
8 intention. What we are trying to prevent, if I might  
9 put it in those terms, is most of the time being  
10 occupied by a formal lengthy presentation which should  
11 probably be presented in some other location as part of  
12 the formal process.

13 We are really trying to make sure that  
14 this provides an opportunity to the local public and  
15 individuals of the local public to address the Board  
16 when we reach their particular locale, that is the  
17 intention of that caveat.

18 Other than that, we will issue those  
19 instructions very shortly.

20 MS. CRONK: Mr. Chairman, just before  
21 re-examination commences may I, through you, ask for  
22 clarification of at least one aspect then of how the  
23 satellite hearings are going to be conducted?

24 THE CHAIRMAN: Yes.

25 MS. CRONK: Do I understand that at the

1 formal session at which the Board will be in  
2 attendance, at the outset then there will be  
3 evidence-in-chief called by the MNR through particular  
4 witnesses, those witnesses then being subject to  
5 cross-examination followed by the receipt of public  
6 submissions?

7 THE CHAIRMAN: No, that wasn't the  
8 Board's intention. What the Board's intention, I think  
9 was, is to basically have the witnesses from MNR  
10 available in sort of a panel format and allow members  
11 of the public who wish to address the Board to do one  
12 of two things: To either make a submission to the  
13 Board, and that might be by way of submitting a  
14 document or reading a letter or making an oral  
15 presentation to the Board, followed by other members of  
16 the public who may wish to question the panel of  
17 witnesses that are there.

18 We didn't intend particularly that that  
19 session would be a presentation -- a formal  
20 presentation by MNR of any of the evidence.

21 MS. CRONK: I had not understood that was  
22 the purpose either, but I when reviewed the letter and  
23 saw that there was reference being made to MNR  
24 witnesses being called, the structure of it was a  
25 little confusing to me.

1 So that before the Board then receives  
2 public submissions at the formal session, those members  
3 of the public in attendance will have the right, in the  
4 first instance, prior to giving evidence themselves, to  
5 ask questions of a panel of witnesses of the MNR?

6 THE CHAIRMAN: Or vice versa. In other  
7 words, they may wish to make a formal presentation to  
8 the Board. That is one of the purposes of the  
9 satellite session, to be able to hear from members of  
10 the public who can't otherwise attend Thunder Bay or  
11 one of the other locations.

12 MS. CRONK: I understand, sir.

13 THE CHAIRMAN: Okay. But, secondly, we  
14 want to have the MNR witnesses on hand to be able to  
15 provide answers by way of information to questions  
16 asked.

22 MS. CRONK: My only point, sir, is those  
23 questions and answers then will be under oath?

24 THE CHAIRMAN: Not normally.

25 MS. CRONK: That is what I was trying.

1 to...

2 THE CHAIRMAN: No.

3 MS. CRONK: But it will be in the  
4 presence of the Board?

5 THE CHAIRMAN: Yes. Oh, yes, the Board  
6 will be there. We try to make that particular session  
7 as informal as possible with members of the public.

8 MS. CRONK: Thank you, Mr. Chairman.

9 THE CHAIRMAN: And they would just answer  
10 questions and it can be directed to any member on that  
11 panel, and if the panel can provide an answer, so be  
12 it.

13 Don't forget, one of these members of  
14 this panel will be the local district manager of that  
15 particular locale and so hopefully that person can  
16 handle most of the questions of a local nature.

17 MS. CRONK: I would like to consider that  
18 matter, Mr. Chairman, if there's anything further that  
19 I wish to say, perhaps I could raise it at a later  
20 date.

21 THE CHAIRMAN: Okay. And as far as other  
22 counsel present for the other parties, it is possible  
23 during the formal submission stage of any of these  
24 members of the public when they read in a submission  
25 that counsel may want to question them, that is

1 generally allowed, bearing in mind that we are not  
2 looking for a go-for-the-throat type of  
3 cross-examination.

4 MS. CRONK: You were looking over there.

5 THE CHAIRMAN: No, no. In other words,,  
6 there can be some questions asked by other counsel in  
7 terms of cross-examination, clarification questions, et  
8 cetera. We are not are particularly wanting to subject  
9 members of the public to a rigorous cross-examination,  
10 particularly in view of the fact that most of them will  
11 be unrepresented.

12 MR. LINDGREN: Mr. Chairman, one further  
13 point of clarification. You have just indicated that  
14 the MNR witnesses will not be sworn in.

15 I have just spoken with Ms. Murphy about  
16 this particular issue. It was my understanding that  
17 these witnesses would be sworn in.

18 THE CHAIRMAN: Oh now, just a moment. It  
19 may be that the MNR witnesses might be sworn. You  
20 know, we expect them to be witnesses of the proponent.  
21 I don't see any problem with them being sworn. What we  
22 are saying is, we are not going to necessarily swear in  
23 all of the parties who wish to address the Board.

24 MR. LINDGREN: I have no problem with  
25 that. I believe that the MNR witnesses should be sworn

1 in and should be on the record.

2 THE CHAIRMAN: Oh yes. Well, that will  
3 definitely be on the record and we don't have any  
4 difficulty with the MNR witnesses being sworn.

5 MS. CRONK: I don't want to complicate it  
6 further this morning, Mr. Chairman, but I would like to  
7 consider the implications of what has been said.

8 THE CHAIRMAN: Okay. Now, again, we are  
9 trying to avoid, as much as possible, any major  
10 evidentiary problems. Bear in mind that the Board  
11 looks at these proceedings as being difficult for  
12 ordinary members of the public to follow along, given  
13 the fact they are located in Thunder Bay for the most  
14 part and given the fact that they are lasting in excess  
15 of probably two years.

16 As a consequence, I think all of the  
17 parties are going to have to make whatever  
18 accommodation they can, realizing that the Board will  
19 be looking at any evidentiary problems that may appear  
20 *prima facie* in a manner which will ultimately in the  
21 long run not cause the parties a problem.

22 So you can sort of raise the formal  
23 objections if you want at the appropriate time, but we  
24 don't feel necessarily it will cause the parties  
25 ultimately a large problem.

1 MS. SEABORN: Two short questions, Mr.  
2 Chairman.

3 First of all, has the Board had any  
4 indication from any of the parties on the part-time  
5 list that they wish to call evidence in Dryden? And,  
6 secondly, if any party does file a submission, whether  
7 it's a letter or whatever, with the Board prior to  
8 attending in Dryden, is that something that would be  
9 circulated to the parties before the appearance in  
10 Dryden?

11 THE CHAIRMAN: Well, I think the practice  
12 will be that if a letter is in fact submitted to the  
13 Board in advance of the proceedings that is intended to  
14 be filed, the Board will endeavor to have it  
15 circulated.

16 It may be that we can't physically  
17 circulate it in advance, but in it will, in any event,  
18 be available for parties at the proceeding, that is No.  
19 1.

20 No. 2, we haven't had, I don't think at  
21 this point in time, any indication of parties who wish  
22 to make a presentation, but we do recall from the  
23 preliminary hearings that some parties attended,  
24 particularly when we held one of the preliminary  
25 hearings in Dryden, and indicated some interest in

1 these proceedings. We presume that once the notice  
2 goes out, they will want to attend and perhaps make a  
3 formal presentation.

4 MS. SEABORN: Thank you.

5 THE CHAIRMAN: Anything else with respect  
6 to this?

7 (no response)

8 Okay. We will issue the direction  
9 shortly. Thank you.

10 MR. FREIDIN: Just one comment. My  
11 understanding when I was in Dryden, I think there was  
12 only one person I believe --

13 THE CHAIRMAN: It was the Mayor of Dryden  
14 I believe indicated --

15 MR. FREIDIN: Mayor Jones. He wasn't the  
16 mayor at the time, but he has been...

17 THE CHAIRMAN: We also think the  
18 Northwest Chamber of Commerce might have had a  
19 representative who appeared in Dryden as well.

20 MR. FREIDIN: Oh yeah, there were other  
21 people who were Dryden. I guess -- maybe it was in  
22 discussions that I had with those people, I got the  
23 impression that most of them were wanting to present  
24 their evidence in places other than Dryden, but we will  
25 see. I don't want to complicate things either.

1                   RE-DIRECT EXAMINATION BY MR. FREIDIN:

2                   Q. Mr. Churcher and Mr. Galloway, could  
3                   you have in front of you Exhibit 56 which is the Forest  
4                   Resources of Ontario, 1986, and page 123 of the Panel  
5                   13 witness statement.

6                   I don't believe Mr. Galloway needs the  
7                   Forest Resources of Ontario.

8                   MR. FREIDIN: Mr. Chairman, I am a bit  
9                   slow here. I have left my Panel 13 statement up in my  
10                   office and somebody is going to fetch it back. I might  
11                   be able to do this without the notes I have written in  
12                   my copy.

13                   MRS. KOVEN: What was the page number,  
14                   Mr. Freidin?

15                   MR. FREIDIN: Page 123. It always  
16                   happens in the excitement of anticipating  
17                   re-examination.

18                   THE CHAIRMAN: The Board doesn't think  
19                   you have been so quiet for so long.

20                   MR. FREIDIN: Well, as you will see --

21                   THE CHAIRMAN: In a very long time.

22                   MR. FREIDIN: Well, as you will see  
23                   later, Mr. Chairman, I have no intentions of being  
24                   quiet.

25                   Q. Now, Mr. Churcher, Mr. Castrilli

1       asked you some questions about the comparison between  
2       certain figures found in the paper by Gross which  
3       includes page 123 of the witness statement?

4                    MR. CHURCHER: A. Yes.

5                    Q. And other figures found in Exhibit 56  
6        which is the Forest Resources of Ontario, 1986 and, in  
7        particular, page 43 of that document that I will be  
8        referring you to.

9                    Now, if we could first go to the paper by  
10      Mr. Gross, could you answer the following general  
11      questions: Are all species of spruce equally  
12      susceptible to mortality due to infestations of spruce  
13      budworm?

14                   A. No, they are not.

15                   Q. Could you explain that?

16                   A. Black spruce tends to be -- or is  
17      less susceptible to mortality after feeding by spruce  
18      budworm than white spruce.

19                   Q. Okay. Now, if we look at the table  
20      on page 123 of the witness statement, does that table  
21      indicate the average loss in different species of  
22      spruce?

23                   A. Yes. The losses for spruce budworm  
24      are broken down into losses with respect to black  
25      spruce, and as well as white spruce, as well as balsam

1 fir.

2 Q. All right. And the numbers -- or the  
3 losses for black spruce and white spruce then are the  
4 first two numbers under the total or the column  
5 entitled: Total?

6 A. Yes, that's correct.

7 Q. Okay. Now, if we can go to page 43  
8 of Exhibit 56, Mr. Castrilli referred you to the part  
9 of Table 6 which deals with spruce, which is the fourth  
10 working group identified.

11 Does this table indicate the species  
12 breakdown in Ontario -- sorry, we are looking at the  
13 fourth column, horizontal column on Table 6. Does this  
14 table indicate the species breakdown in Ontario between  
15 white spruce and black spruce?

16 A. No, it just -- the fourth row refers  
17 only to spruce.

18 Q. Okay. Mr. Galloway, given your  
19 experience in the boreal forest, can you give a general  
20 indication of the percentage of that total volume that  
21 is white spruce?

22 MR. GALLOWAY: A. Yes, that would be  
23 approximately 25 per cent.

24 Q. So, therefore, if we are looking at  
25 the total figure on page 43 of approximately 2-billion

1 gross total volume, the gross amount of growing stock  
2 of white spruce would roughly be 25 per cent of that  
3 amount?

4 A. Yes.

5 Q. Now, Mr. Churcher, if we can go back  
6 to page 123, the annual loss of white spruce between  
7 1977 and 1981 I believe is indicated in that chart?

8 MR. CHURCHER: A. Yes, it is.

9 Q. And what is that figure?

10 A. The total figure is 1,690,000 cubic  
11 metres.

12 Q. And that is an average for each year  
13 between '77 and '81?

14 A. Yes, that's correct.

15 Q. So if we wanted to determine the loss  
16 over a five-year period for white spruce, it would be a  
17 matter of multiplying that particular amount by five?

18 A. Yes, that's correct.

19 Q. Could you advise me, Mr. Churcher,  
20 which of the two species of spruce is of primary  
21 concern in the spruce budworm program?

22 A. White spruce is the major species.

23 Q. For the reason that you indicated,  
24 they are more susceptible?

25 A. That's correct.

1                   Q. Could you comment generally on the  
2                   validity of comparing the average annual mortality  
3                   figures that we have in Exhibit 123 to the total  
4                   growing stock of spruce as reported in the Forest  
5                   Resources of Ontario?

6                   A. Yes. I would feel that when we are  
7                   talking about general numbers of this nature,  
8                   provincial-wide numbers, that they are difficult to  
9                   compare the two, that you can draw incorrect  
10                   conclusions.

11                   You have to look at the losses such as  
12                   expressed here or the impact what the budworm can do on  
13                   a species like white spruce on a very localized basis  
14                   or localized nature. Comparing the losses to the  
15                   provincial growing stock of white spruce may not be an  
16                   accurate comparison.

17                   Q. Thank you. Again staying with you,  
18                   Mr. Churcher, when looking at the comparisons between  
19                   these figures that we are talking about, Mr. Castrilli  
20                   asked you a series of questions based on these gross  
21                   total numbers and asked you to agree that some people  
22                   would conclude that it is not necessary to spray.

23                   Do you recall that line of questioning?

24                   A. Yes, I do.

25                   Q. Now, in putting the questions to you,

1 Mr. Castrilli based his question on the following  
2 qualification - I think I have got it down fairly  
3 accurate - he says: "Looking at it globally, but  
4 without looking at the management unit, and then he  
5 went on and asked you the question.

6 What is the significance, if any, of that  
7 qualification? And what I am getting at is: Would  
8 your answer be different to his question if you looked  
9 at the management unit level as opposed to looking at  
10 it globally?

11 A. Yes, it would.

12 Q. And how would it be different, or how  
13 is that significant?

14 A. Well, as I indicated, I feel that  
15 when you look at it at the management unit level that  
16 the implications or the impacts that the budworm would  
17 have on the white spruce at that unit level may very  
18 well indicate that a spruce budworm spray program or  
19 some form of intervention of managing the spruce  
20 budworm would be warranted.

21 Q. And, Mr. Galloway, having been --  
22 having worked at the management unit level and being in  
23 the field is the qualification; that is, leaving aside  
24 considerations of a management unit, is that a  
25 qualification which is significant to you when one is

1 considering the answer?

2 MR. GALLOWAY: A. Yes. The impact at  
3 the management unit level could in fact mean the lack  
4 of wood supply for a specific industry in that area and  
5 it would have major effects at a management unit level  
6 and a local community level but would not show as an  
7 effect on the global provincial numbers.

8 Q. Thank you. Mr. Churcher, back to  
9 you. Mr. Castrilli asked you whether letting nature  
10 run its course is an option with budworm and you  
11 responded: "Definitely." Do you recall that?

12 MR. CHURCHER: A. Yes, I do.

13 Q. Now, in answer to a question from the  
14 Chairman you indicated that the actual area of  
15 infestation treated has been roughly two per cent or  
16 you may have said between one and two per cent; is that  
17 correct?

18 A. Yes, it varies from year to year, but  
19 as a general rule, two per cent -- one or two per cent  
20 would be a fair figure.

21 Q. Okay. Given that, can you comment on  
22 whether letting nature take its course is an option  
23 that is actually chosen for part of the area of  
24 infestation?

25 A. Yes, using those figures I would --

1 that would indicate that letting nature take its course  
2 is the Ministry's option over roughly 98 per cent of  
3 the infestation.

4 Q. And on that two per cent of the area  
5 that is treated, what evidence is there about how that  
6 area is chosen? How do you choose what two per cent is  
7 going to get sprayed?

8 A. I believe in my written evidence  
9 there are nine criteria listed as -- to explain when an  
10 area may be selected for treatment.

11 Q. And where do we find those nine -- I  
12 think it starts at page 96?

13 A. Yes, that would just -- 96 to  
14 approximately 100 or 101 -- page 100.

15 Q. And I don't think we need to review  
16 those, Mr. Churcher. Can you advise me: Is the  
17 procedure for the aerial application of insecticides --  
18 does that have any evidence which identifies how that  
19 two per cent gets identified?

20 A. Yes, in the procedure for the aerial  
21 application of insecticides for forest management there  
22 are a number of -- or two classes of forests that would  
23 qualify to be aerially treated with insecticides, and  
24 those being, as we have discussed before, the  
25 commercially operable forests and the high value

1 forests and --

2 Q. Now, the commercial -- sorry.

3 A. And it provides a number of details  
4 as to what would then qualify for those two classes.

5 Q. All right. And just for the record,  
6 are those two categories of commercially operable  
7 forests and high value forests contained in the  
8 procedure at pages 150 through to 152?

9 A. Yes, that's correct.

10 Q. And if we look at the high value  
11 forests which are described on page 151, are there  
12 three categories of high value forests?

13 A. Yes, there are.

14 Q. And, again, they are described under  
15 the headings Category 1, 2 and 3?

16 A. That's correct.

17 Q. Okay. Would you take out your copy  
18 of Exhibit 669, Mr. Churcher, which is the paper by Mr.  
19 Gordon.

20 MR. FREIDIN: It looks like this Mr.  
21 Martel (indicating). We have got an extra copy. I am  
22 not sure whether you are going to need the copy  
23 specifically.

24 MR. CHURCHER: I have an extra copy here,  
25 Mr. Freidin, if that will help.

1 MR. FREIDIN: Sure. If you would perhaps  
2 provide that to Mr. Martel.

3 MR. CHURCHER: (handed)

4 MR. MARTEL: Thank you.

5 MR. FREIDIN: It's nice to see someone  
6 else gets lost in the paper war from time to time, Mr.  
7 Martel.

8 MR. GALLOWAY: It's a management problem.

15 MR. CHURCHER: A. Yes.

16 Q. Now, Mr. Castrilli took you to this  
17 paper and he quoted a section - I'm sorry, I just  
18 haven't got the page number - on page 23, and it was  
19 the first four lines in the first full paragraph which  
20 read:

21                   "If the present overstorey, including the  
22                   rising secondary stand wave were now  
23                   wiped out, the stand would have a much  
24                   more favourable composition of spruce  
25                   relative to fir."

1 A. Yes.

2 Q. Now, Mr. Churcher, I have read the  
3 paper and it is somewhat confusing. It wasn't dealt  
4 with in total by Mr. Castrilli and I am wondering  
5 whether you could just explain briefly what Mr.  
6 Gordon's hypothesis is and include in that what he  
7 means by secondary stand wave?

11 Q. And what kind of stand was that?

12 A. It was a balsam fir/white spruce  
13 stand.

Q. Thank you.

22 Q. Is understorey a term which could  
23 properly describe that?

24 A. Yes, that would be a fair term.

25 Q. And does the document indicate which

1 species the understorey consisted of?

2                   A. Again, it would be predominantly  
3 balsam fir with some white spruce. The original --  
4 again, as I understand the paper, initially the ratio  
5 of balsam fir to white spruce would be 7:1, there would  
6 be seven times as much balsam fir than there would be  
7 white spruce.

8                   Now, this paragraph that Mr. Freidin just  
9 quoted begins:

10                  "If the present overstorey..."  
11 including what is now this understorey was wiped out by  
12 subsequent budworm infestation, then, again, a lot of  
13 the balsam fir would be killed off leaving more white  
14 spruce, and the words:

15                  "...the stand would have a much more  
16 favourable composition of spruce relative  
17 to fir..."

18 The 'more favourable' is just an indication that  
19 instead of having a 7:1 ratio of fir to spruce, we  
20 would now have a 2:1 ratio of fir to spruce.

21                  There would still be twice as much fir as  
22 spruce. And I believe the figures he provides based on  
23 this one stand that he looked at, there would be  
24 roughly 2,500 stems per hectare of fir and 1,250 stems  
25 per hectare of white spruce.

1                           MRS. KOVEN: By wiped out, does he mean  
2                           by budworm infestation, or cutting, or any means?

3                           MR. CHURCHER: I believe he is implying  
4                           budworm; however it could equally be applicable to fire  
5                           or some other natural harvest method like that.  
6                           Whether or not harvesting by man would be included in  
7                           that, I am not sure.

8                           MRS. KOVEN: Well, I thought it was just  
9                           for budworm, because if it were harvested then the  
10                           balsam fir and white spruce would again be unequal?

11                          MR. CHURCHER: Yes, that would be a  
12                          reasonable conclusion.

13                          MR. FREIDIN: Q. Mr. Churcher, you said  
14                          that the secondary wave or the understorey would be  
15                          eaten by a subsequent budworm attack, and does the  
16                          paper explain when that second budworm attack would  
17                          occur so that you would have the wiping out as referred  
18                          to?

19                          MR. CHURCHER: A. Not as I read the  
20                          paper, no. There is no implication of when that would  
21                          occur.

22                          Q. And do you know or can you indicate:  
23                          If you have a budworm epidemic in a particular stand,  
24                          can you indicate when the next epidemic or the  
25                          subsequent budworm attack is likely to be in that

1 specific stand?

2                   A. I believe in the graphs that I  
3 presented in my written evidence and in response to a  
4 cross-examination question from Ms. Cronk, I believe I  
5 indicated that roughly we are talking about a 30 to  
6 40-year period between outbreaks in any given stand.

7                   Q. So that whether that second outbreak  
8 actually comes back and eats that stand in 30 or 40  
9 years is a hypothetical, for starters?

10                  A. Yes. There could be other factors  
11 that may have occurred in that 30 to 40-year period  
12 which may not have made the stand as susceptible to a  
13 subsequent budworm outbreak.

14                  Q. Now, Mr. Churcher, if you wanted to  
15 test whether Mr. Gordon's hypothesis worked in the  
16 field, in the real world, how long would it take?

17                  A. Well, given that 30, 40-year time  
18 frame you were just discussing, it would take at least  
19 that long. We would have to find a stand now that fits  
20 this description where a lot of the balsam fir was  
21 wiped out by the current epidemic and then watch what  
22 happened as that stand regenerated until the next  
23 outbreak occurred in that stand 30 to 40 years or more  
24 in the future.

25                  Q. Okay. Now, would it be worth finding

1 out whether the hypothesis is correct?

2 A. Yes, definitely.

3 Q. And, in your view, could we afford to  
4 experiment to determine whether the hypothesis is  
5 correct by leaving all of the area that we are talking  
6 about unsprayed, including the two per cent -- the one  
7 or two per cent that you spray on an annual basis?

8 A. No, I don't think that would be a  
9 wise management decision.

10 Q. Why not?

11 A. Well, conducting an experiment on  
12 that grandiose scale would not allow the foresters or  
13 the managers to meet the objective that they were  
14 attempting to carry out.

15 It might be wise to conduct those  
16 long-term experiments on select areas across the area  
17 of the undertaking so you can learn from that, and when  
18 the next epidemic arrives you would have learned  
19 something and gained some knowledge, but treating the  
20 entire area as a grandiose experiment would not be  
21 appropriate.

22 Q. And the objective that you referred  
23 to would be what?

24 A. The objective of timber management.

25 Q. Thank you. I think I am finished

1 with you for a few moments, in any event, Mr. Churcher.

2 I would like to turn to Mr. Hynard. Mr.  
3 Castrilli -- and perhaps you may want to refer to  
4 Exhibit 670, Mr. Hynard. In case you do, perhaps you  
5 could just have that document in front of you.

6 Now, Mr. Castrilli --

7 MR. FREIDIN: Sorry. It looks like that,  
8 a two-pager (indicating). It is the document: Recent  
9 Advances in Spruce Budworm Research.

10 Q. Mr. Hynard, Mr. Castrilli asked you a  
11 series of questions, both of you and Mr. Churcher  
12 actually, relating to the use of modified harvest  
13 techniques to control budworm.

14 Now, by modified harvest techniques he  
15 was referring to strip cuts, block cuts, shelterwood  
16 cuts. Was that your understanding during that  
17 questioning?

18 MR. HYNARD: A. Yes, it is.

19 Q. Now, in Exhibit 670, am I correct  
20 that the discussion is about shelterwood cutting?

21 A. Yes, it is.

22 Q. And I believe you pointed out that  
23 the species being discussed in this exhibit was red  
24 spruce; is that correct?

25 A. Yes, I note that on the second page,

1 caption to Figure 1.

2 Q. Now, in answering Mr. Castrilli you  
3 started to describe the problems associated with  
4 modified cuts in white and black spruce.

5 And my question for you is: Would you  
6 use strip cuts, block cuts or shelterwood cuts to  
7 control spruce budworm if it was inconsistent with the  
8 silvics of the species?

9 A. Well, absolutely not. It would make  
10 no sense at all to carry out a silvicultural harvest  
11 system that was incompatible with the silvics of the  
12 species. That would do nothing to work towards budworm  
13 control.

14 Q. And what spruce species are we  
15 talking about when we talk about spruce in Ontario?

16 A. We are talking about white spruce and  
17 black spruce.

18 Q. And modified harvesting can occur in  
19 certain areas in relation to those species?

20 A. Yes, it can. There was considerable  
21 evidence given in Panel 10 on exactly that, especially  
22 with regard to black spruce.

23 Q. I understand that you gave evidence  
24 in Panel 10 regarding the limits or the limitations in  
25 terms of the areas on which you could actually engage

1 in that activity?

2 A. Yes, yes. They could only be  
3 feasibly practised on appropriate sites where the  
4 conditions were suitable for that kind of silvicultural  
5 harvest system and natural regeneration method.

6 Q. Thank you. Now, if we look at the  
7 rest of the paper and if we look at the first full  
8 page -- if we look at the left-hand column, the last  
9 line of the left-hand column, right in the middle of  
10 the page it reads:

11 "These stands can be cultured into new  
12 stands containing a higher percentage of  
13 the more desirable spruce."

14 A. Yes, I see that.

15 Q. Could you explain how that could  
16 happen after a shelterwood cut?

17 A. Yes. And, again, we are talking  
18 about red spruce here.

19 Q. Yes.

20 A. And I should point out that red  
21 spruce is not a species of any importance in Ontario.  
22 It does occur in a few isolated little pockets in  
23 Minden District and parts of Bancroft and Algonquin  
24 Park also, but it represents no volume or area of any  
25 significance at all.

6                   If there were advanced reproduction on  
7                   the forest floor at the time of harvest and if the  
8                   shelterwood conditions provided a competitive edge to  
9                   that advanced reproduction over other tree species  
10                  which would also regenerate naturally, then the spruce  
11                  content could conceivably be raised.

18 It does produce advanced reproduction on  
19 the forest floor; that is, it can germinate and  
20 establish without seedbed preparation on certain sites.  
21 And so if there were a red spruce advanced reproduction  
22 on the forest floor, then shelterwood cutting could  
23 favour the spruce over other naturally regenerating  
24 trees because it is more tolerant and is present at the  
25 time of the initial harvest.

1 So for that reason, shelterwood cutting  
2 could, under those circumstances, create new stands  
3 containing a higher percentage of the more desirable  
4 spruce.

5 Q. And could you advise me: If you  
6 engage in that shelterwood cutting for the purposes of  
7 raising the content of the red spruce in those  
8 particular stands, could that activity be described as  
9 stand conversion?

14                   If they raised the content, if the  
15                   percentage they obtained was such that the spruce was  
16                   now the predominating species, that new stand could be  
17                   a spruce working group, in which case we are looking at  
18                   stand conversion.

19 Q. Thank you. I direct you to the same  
20 exhibit, the same page but to the right-hand side of  
21 the page, starting about seven or eight lines up in the  
22 middle of the column it says:

## 23 "Potential crop trees..."

24 Do you have that location?

25 A. Yes, I do.

1

Q. And the document reads:

2

"Potential crop trees of desirable  
3 species, vigor and form should be  
4 selected and adequate growing space  
5 provided by removing unwanted and  
6 competing trees."

7

8

Now, is that kind of activity sometimes  
referred to as tending?

9

A. Yes. Yes, it is.

10

11

12

Q. Now, if you were going to carry out  
this treatment over a large area, what methods would  
you use and what limits would there be?

13

14

15

A. Let me read the previous two  
sentences so I understand the context in which he is  
prescribing this.

16

17

18

He's referring to tending treatments that  
would be conducted 5 to 10 years after the regeneration  
was established.

19

20

21

22

23

24

25

So we are talking about what we have  
referred to in our evidence as a cleaning treatment and  
that cleaning treatment would be conducted -- well, I  
don't know the technique that would be used in this  
particular case, it would depend entirely on the  
species involved and the situation as to what that  
technique might be.

1                   Q. Okay, I think that's fine. I would  
2 like to go to you, Ms. Krishka. A few questions about  
3 the Hubbard Brook experiment. You may -- I'm sorry, I  
4 don't think you will need any exhibits. If you do, of  
5 course, feel free to refer to them.

6                   You agreed during cross-examination that  
7 under extreme conditions timber management activities,  
8 including the use of herbicides could alter nutrient  
9 and hydrologic cycles. And my question for you is:  
10 Could natural disturbance have a similar effect?

11                  MS. KRISHKA: A. Definitely that could  
12 happen and I believe that Mr. Armson described such an  
13 instance in Panel 9 when he was talking about wild  
14 fire.

15                  Q. Thank you. Again in relation to the  
16 Hubbard Brook experiment, you indicated that in terms  
17 of the activities in Watershed No. 2 and, particularly  
18 the use of herbicides to facilitate that part of the  
19 experiment which took place in Watershed No. 2, the  
20 activities were not similar to timber management  
21 operations in the area of the undertaking.

22                  Do you recall giving that evidence?

23                  A. Yes, I do.

24                  Q. Can you help us, Ms. Krishka, as to:  
25 How do the forests and the site conditions in Watershed

1                   No. 2 and, in fact, in the entire Hubbard Brook  
2                   experimental area compare to the area of the  
3                   undertaking?

4                   A. Well, they are very different. The  
5                   study was done in Oregon and it was on a watershed.  
6                   The area had a 29 per cent slope and the cutting  
7                   practices went right down to the water's edge.

8                   The conditions were different; they were  
9                   quite coarse soils, sandy loams and coarse-textured  
10                  soil overlying bedrock.

11                  THE CHAIRMAN: Excuse me, Mr. Freidin or,  
12                  s. Krishka. Is not the Hubbard Brook area in New  
13                  Hampshire?

14                  MS. KRISHKA: I'm sorry.

15                  THE CHAIRMAN: New Hampshire?

16                  MS. KRISHKA: Oh, I'm sorry, you're  
17                  right. It's New Hampshire. I was thinking of a  
18                  different study.

19                  MR. FREIDIN: Q. The evidence you gave,  
20                  however, is it information which is in fact accurate in  
21                  relation to the Hubbard Brook experiment in New  
22                  Hampshire?

23                  MS. KRISHKA: A. Yes. I apologize for  
24                  that.

25                  Q. Okay. So you mentioned slope and you

1 mentioned soils. Was there an indication in or can you  
2 indicate what type of forest it was?

3 A. It was a hardwood forest.

4 Q. And in some of the experimental areas  
5 I understand the document indicates that there were  
6 clearcuts of hardwood forests?

7 A. Yes, and that is quite different than  
8 the evidence we have heard earlier in terms of normal  
9 practices in hardwood forests.

10 Q. And when you described the soils,  
11 were you indicating that they were in some way  
12 different from the soils in the area of the  
13 undertaking?

14 A. They are somewhat different. We do  
15 have some coarse-textured soils in the area of the  
16 undertaking, but this particular area was -- there were  
17 areas that were quite shallow with underlying bedrock.  
18 We have areas such as that in the area of the  
19 undertaking, but not necessarily where we would conduct  
20 practices that resembled this study at all.

21 Q. Thank you very much.

22 Mr. Hynard, back to you. Now, you have  
23 indicated actually today, but you indicated in your  
24 evidence during cross-examination that tending,  
25 including chemical release, is part of a silvicultural

1 package?

2 MR. HYNARD: A. (nodding affirmatively)

3 Q. And if herbicide became unavailable  
4 you would have to adjust the total silvicultural  
5 package. And could you explain what you meant by that?

6 A. Oh, yes. You will recall from  
7 earlier evidence that the alternative, alternative  
8 tending technique to chemical is manual but that manual  
9 cleaning methods, especially with aspen, are less  
10 effective; they are less effective, they require  
11 retreatment in many cases and they are not effective at  
12 all against grasses and other herbaceous growth.

13 Therefore, if tending by chemical means  
14 was not available, then those planted trees, assuming a  
15 plantation in this case, would require a very -- a fast  
16 start, they would need very heavy site preparation in  
17 order to give them freedom from competition for a  
18 longer period than they might otherwise have using our  
19 current site preparation techniques.

20 In other words, to be effective, manual  
21 cleaning methods must be dealing with relatively large,  
22 relatively competitive young trees competing with a  
23 hardwood species that are not so numerous or so  
24 advanced over the conifer that it's a hopeless  
25 situation of hacking them down endlessly.

So, in other words, it would require a package that carried with it a much more heavy site preparation technique to get those trees going. It might also eliminate, in many cases, natural regeneration methods for the simple reason that naturals are slow starters.

So that if it was a silvicultural package that included natural regeneration with tending, that option may be eliminated, it may be necessary to return to artificial to again get a faster starting more competitive tree.

Now, in some situations that may be possible. It may be possible to do very heavy mechanical site preparation, for example, for jack pine. Jack pine and white pine, they tolerate that sort of thing well and it gives them a competitive edge; whereas with white spruce, that package may not be viable at all going the very heavy mechanical site preparation route.

Q. There was a discussion - I'm still sticking with the use of herbicides and the possible loss of the use of herbicides - there was a discussion about the clause in the FMA agreements or the FMAs regarding the effect on the obligation of the Ministry and the company if herbicides were not available for

1 us.

2 Mr. Galloway stated that if herbicide was  
3 not available, you would have to reconsider the entire  
4 silvicultural package - evidence very similar to  
5 yours - and he added, including the crop that you are  
6 trying to grow. Do you agree with that evidence?

7 A. Yes, I certainly do.

8 Q. Are there any factors, Mr. Hynard,  
9 which could affect either the ability to adjust the  
10 species of crop trees or the practicality of doing so?

11 A. The factors that -- sorry, could you  
12 repeat that again, please?

13 Q. Are there any factors which could  
14 affect either the ability to adjust the species of crop  
15 trees or the practicality of doing so?

16 A. Well, yes, absolutely. Again, we are  
17 talking there about the choice of crop tree and the  
18 factors that might limit that choice, and I have in my  
19 mind a very productive site, well suited to the  
20 production of spruce but in which case, if chemical  
21 methods were unavailable and heavy mechanical site  
22 preparation techniques unsuitable, those factors of  
23 basic silvics coupled with practicality would require  
24 that it would eliminate spruce as an option on that  
25 particular site.

1                   It may force natural regeneration methods  
2                   to aspen on that site or very, very heavy mechanical  
3                   techniques for jack pine. It might eliminate the  
4                   crop -- a species of choice on that particular site, a  
5                   species well adapted and well suited to that site and  
6                   in demand by industry but no longer practical to place  
7                   back on that site.

8                   Q. Could the markets have any effect on  
9                   the practicality of changing crop trees?

10                  A. Well, yes. Yes, absolutely.

11                  Q. Thank you. Mr. Galloway, there was a  
12                  discussion regarding native community concerns for  
13                  possible effects of herbicide or insecticide on water  
14                  supply.

15                  MR. GALLOWAY: A. Yes.

16                  Q. In that discussion you used an  
17                  example of an area south of Lake Abitibi where potable  
18                  water supply was identified by the Band and you also  
19                  indicated that the supply was reviewed and it was  
20                  determined that it was not within the proposed spray  
21                  area. Do you recall that?

22                  A. Yes.

23                  Q. You also went on and you made this  
24                  following comment, you said:

25                  "From then on, it would be identified as

1 a value."

2 A. Yes.

3 Q. What did you mean by that?

4 A. That because it had been identified  
5 it would then show up on the values map for the timber  
6 management planning process on the sort of permanent  
7 record for that management unit.

8 Q. Mr. Hynard, in reviewing the data  
9 regarding -- perhaps you should get out Exhibit 657  
10 before we start.

11 MR. FREIDIN: 657 is an interrogatory  
12 from Forests for Tomorrow. It's No. 14 for Panel No.  
13 13 -- pardon me, Panel No. 12.

14 MR. HYNARD: I have it.

15 MR. FREIDIN: Do you have an extra copy  
16 of that, 657?

17 MR. GALLOWAY: You can take this.

18 MR. FREIDIN: We have an extra copy,  
19 here.

20 THE CHAIRMAN: I have got it.

21 MR. FREIDIN: Q. Now, in reviewing the  
22 data regarding harvest levels of spruce, jack pine, and  
23 poplar between 1981 and 1987 set out in that exhibit,  
24 Mr. Hynard, you agreed that the most dramatic increase  
25 in volume harvested has been in poplar over that period

1 of time. You also indicated that spruce and jack pine  
2 data showed little change in volume harvested over that  
3 time.

4 Now, you said there was -- you began to  
5 say -- you said there was a reason for that, but you  
6 weren't allowed to continue your response.

7 And what were you attempting to say?  
8 There was a reason for what?

9 MR HYNARD: A. Well, there was a reason  
10 that the consumption of jack pine and spruce had not  
11 increased over that period of time in the same way that  
12 poplar had. And I'm presuming that the reason for that  
13 flat line in consumption of spruce and jack pine has  
14 been supply.

15 That is, it's limited by the maximum  
16 allowable depletion or, more particularly, the areas of  
17 commercially operable forest within that MAD that is  
18 available to the companies.

19 Q. Okay. Now looking at the numbers on  
20 the table for poplar, is the harvest of poplar still  
21 increasing at the same rate as it was increasing in the  
22 early 1980s, based on these numbers?

23 A. No, no. It's levelled off quite a  
24 bit in the past several years.

25 Q. Does that surprise you, Mr. Hynard?

1 A. No, it doesn't surprise me at all.

2 There was considerable gains in poplar consumption  
3 based on new waferboard plants, particularly during the  
4 70s and early 80s, a great amount of growth at that  
5 time, and that market now seems saturated.

6 In other words, everyone who was going to  
7 put waferboard sheathing on their new home has done so  
8 and that growth has definitely dropped off in that  
9 area.

10 Some growth does continue in the use of  
11 poplar in hardwood kraft pulp, and I expect that the  
12 recent gains are in that area.

Q. Thank you.

14 A. Much less in quantity though.

15 Q. Thank you. Staying with you, Mr.  
16 Hynard, my next question actually arises from a  
17 question asked by Mrs. Koven.

18 Just before she asked you the question,  
19 you had told Mr. Castrilli that expected yields at  
20 rotation was relevant when you were making  
21 silvicultural decisions, but it is not necessary to be  
22 able to quantify it.

23 Now, after you made that statement, Mrs.  
24 Koven then asked - and I hope I got you down fairly  
25 accurately here - was that:

1                   "Would it be a different situation or  
2                   wouldn't you be in a different situation  
3                   if you were looking at the expected yield  
4                   of a plantation as opposed to a  
5                   non-plantation. In plantations.."

6                   She indicated:

7                   "....you have more control over planting  
8                   and tending and rotation is lower."

9                   And then she made the comment:

10                  "The first harvest is 30 to 40 years."

11                  Now, you responded:

12                  "Not in Ontario in 30 to 40 years."

13                  What did you mean by that?

14                  A.    Oh, I meant that we certainly do not  
15                  foresee rotation ages, even in intensively managed  
16                  stands, being lowered to anywhere near that level of 30  
17                  to 40 years.

18                  MR. MARTEL: Now, would you thin  
19                  commercially, let's say red pine or so on, at the end  
20                  of 30 or 40 years?

21                  MR. HYNARD: Yes, certainly thinnings are  
22                  possible at the age of 30 to 40 years and thinnings  
23                  along the lines of those slides I showed in the red  
24                  pine plantation and certainly in Minden we begin  
25                  thinning at about age 25 or so, and we were thinning it

1 approximately every -- well, certainly every 10 years  
2 thereafter.

3 But those are thinnings, those aren't  
4 full rotation age and harvest cuts.

5 MR. FREIDIN: And, Mrs. Koven, when I  
6 asked that question I wasn't sure -- well, I wasn't  
7 sure whether you were referring to that type of  
8 operation, the thinning operation, or whether you were  
9 talking about rotation -- full rotation, and I would  
10 just ask you if there is still something that is  
11 unclear about that matter, perhaps you can ask Mr.  
12 Hynard.

13 MRS. KOVEN: Well, if it's commercial  
14 thinning that you are talking about?

15 MR. HYNARD: Yes. Yes, there is a  
16 difference of course between thinnings and final  
17 harvest. Thinnings are tending treatments in which you  
18 are removing some trees to give the trees that remain  
19 in the stand better growing conditions.

20 And in a young stand you may thin it once  
21 or you may thin it repeatedly, depending on the type of  
22 stand and the products that you are growing and so on.

23 The final harvest is at that time at  
24 which you harvest the stand and replace it and start  
25 all over again. So there is quite a difference between

1           thinnings and rotation age harvests.

2           MRS. KOVEN: In terms of commercial use  
3           of the wood though, commercial thinning is very  
4           attractive to industry?

5           MR. HYNARD: Well, if they were able to  
6           do so profitably, absolutely, because it increases the  
7           yield over time, you are gaining all those trees that  
8           would otherwise be lost to mortality as the stand thins  
9           itself.

10           So you are gaining extra wood, and you  
11           are gaining that extra wood in areas potentially closer  
12           to your mill and near a road system. The area was  
13           established at one time and there is a road system  
14           nearby or one that would be restored.

15           However, there is the realities of the  
16           economics too, and when you deal with relatively low  
17           yields from thinnings, after all you are not getting  
18           all the timber in the stand, it's a relatively young  
19           stand, and you are only removing some of the trees,  
20           perhaps anywhere from a quarter to a half of the trees.  
21           And, in that situation, your yield is low and your  
22           products are very small, so you have got a high  
23           handling cost.

24           MRS. KOVEN: The yield might be  
25           acceptable though?

1 MR. HYNARD: Oh, yes, it may be and  
2 whether it is, wherever those operations are  
3 profitable, then I would expect them to be occurring.

4 MRS. KOVEN: And also you don't have the  
5 cost and the investment of regenerating it though?

6 MR. HYNARD: Well, that's another  
7 important factor too, yes. But given that the low  
8 yields, the small size, the high logging costs of  
9 thinning in this fashion, and the low value of the  
10 products, there are very few situations in which  
11 commercial thinning is profitable today.

12 Now, that may change.

13 MRS. KOVEN: Well, obviously, I don't  
14 think it applies to the pulp and paper industry, but to  
15 saw logs and that sort of industrial use, I think it's  
16 a difference situation?

17 MR. HYNARD: Yes, that's true, much more  
18 so for saw logs, although the thinnings themselves may  
19 be pulpwood, the thinnings that come out.

20 MR. FREIDIN: Q. Can you advise: Are  
21 commercial thinnings more predominantly -- do they take  
22 place more frequently in natural stands or in  
23 plantations?

24 MR HYNARD: A. Within the area of the  
25 undertaking?

1                   Q. Yes.

2                   A. Well, there are three situations  
3                   essentially in which commercial thinnings occur within  
4                   the area of the undertaking.

5                   The one is red pine plantations towards  
6                   the south end of the area of the undertaking, like  
7                   around Minden, and there are commercial thinnings in  
8                   red pine done in the Kirkwood Unit, there is some going  
9                   on now in Parry Sound District, so in that area where  
10                  there is a pulpwood market for red pine and where there  
11                  are young plantations ready for thinning, that is the  
12                  one area.

13                  The second major area is in maple, young  
14                  even-aged second growth maple stands along the lines of  
15                  the photograph that I showed and the biscuit that I  
16                  provided you. That kind of situation in which natural  
17                  maple stands, probably of clearcut or of fire origin,  
18                  are being thinned to increase saw log production and  
19                  the thinnings are being removed and sold commercially  
20                  as fuelwood. That kind of thinning is very common in  
21                  the Algonquin Region.

22                  The third type of thinning described in  
23                  the statement of evidence is in middle-aged white/red  
24                  pine natural stands in which thinnings are occurring to  
25                  remove saw logs and favour the residual stands.

1 Now, to give you a percentage of which is  
2 greater, I'm not sure, I would say natural stands. But  
3 actually plantation management is more suitable  
4 generally to commercial thinnings, it's just that there  
5 aren't very many at that age at that time within the  
6 area of the undertaking.

7 Q. That's fine, thank you very much, Mr.  
8 Hynard.

9 MR. FREIDIN: Did you have any thoughts  
10 as to whether you wanted to have a break before -- I  
11 think I'm going to be another half hour anyway -- yes,  
12 about that.

13 THE CHAIRMAN: All right. Why don't we  
14 just continue through and finish off.

15 MR. FREIDIN: Okay

16 Q. Ms. Krishka, questions arising from  
17 Exhibit 628 and 629. They were two papers, the one  
18 dealing with three plantations near Manitouwadge, the  
19 other one dealing with the stand near Atikokan. Okay.  
20 Now, do you have them?

21 MS. KRISHKA: A. Yes.

22 Q. You were asked a number of  
23 questions --

24 MR. FREIDIN: It may not be necessary to  
25 have that actual exhibit in front of you, Mr. Martel.

1                   Q. You were asked a number of questions  
2                   about Exhibit 628 which is the study regarding spruce,  
3                   the three plantations near Manitouwadge.

4                   Mr. Castrilli asked you a number of times  
5                   where in Exhibit 628 you indicated the effect 2,4-D had  
6                   on survival of seedlings planted.

7                   How old were the stands that you treated  
8                   at the time of the treatment?

9                   MS. KRISHKA: A. Well, each plantation  
10                   was a different age and it's listed on page 4, Tab 1.

11                   Q. All right. And what were the years  
12                   or the ages of the stands?

13                   A. One was 7 years, the other was 11  
14                   years and the other was 13.

15                   Q. Would you describe those trees as  
16                   tree seedlings?

17                   A. Yes.

18                   Q. Mr. Castrilli, in relation to Exhibit  
19                   629 which is the jack pine stand near Atikokan, asked  
20                   you: Where the size is the survival data, and you  
21                   responded we weren't looking for that information.

22                   A. Yes.

23                   Q. Could you explain that?

24                   A. Well, we were -- in working in the  
25                   stand it was clear that it was a jack pine stand, that

1 was highly stocked and it was apparent, as we were not  
2 surprised it was apparent, that survival or stocking  
3 wouldn't be a concern, stocking -- or survival rather  
4 wouldn't be a concern in that stand.

5 We did check to see if the stocking  
6 levels were -- the density, rather, was comparable.

7 Q. Thank you. Mr. Galloway, could you  
8 indicate when in the life of a plantation survival  
9 assessments are done?

10 MR. GALLOWAY: A. Yes. Normally that  
11 would be done either at the end of the first growing  
12 season or the second growing season.

13 Q. Mr. Hynard, during Mr. Castrilli's  
14 cross-examination of Ms. Krishka about where you could  
15 find this survival data in the two reports that we just  
16 discussed, you interjected and stated that the  
17 Provincial Auditor's report deals with the survival,  
18 but once again - and perhaps unfortunately - you were  
19 not allowed to continue.

20 And my question is: Where does the  
21 Auditor's Report deal with the topic of survival and  
22 what is the point that you wanted to make?

23 MR. CASTRILLI: Mr. Chairman, as I  
24 recall, cross-examination or re-examination is limited  
25 to what occurs during cross-examination.

1 At the time of the discussion I had with  
2 Mr. Hynard, we were discussing Exhibit 628 and whatever  
3 the Provincial Auditor may have to say about issues in  
4 general he has nothing at all to say in relation to  
5 Exhibit 628.

6 I objected to Mr. Hynard making the  
7 reference then and I object now.

14 This is re-examination.

15 MR. FREIDIN: Q. So, Mr. Hynard, could  
16 you answer that question?

17 MR HYNARD: A. Yes. The subject that we  
18 were talking about at that time was the correlation  
19 between survival and success of newly regenerating  
20 stands and tending, that was the subject that was  
21 raised.

22 And the reference to the Provincial  
23 Auditor's Report is contained on page 11 of that  
24 report, which is Exhibit 28. In the sixth paragraph,  
25 in that paragraph the Provincial Auditor made two

1 notes. The second one reads:

2                    "In addition, there was a correlation  
3                    between those regions which did the most  
4                    tending as compared to their plans and  
5                    the percentage of satisfactorily  
6                    regenerated areas in those regions."

7                    Q. Mr. Galloway, Mr. Castrilli  
8                    questioned you regarding Exhibit 677, that is the  
9                    Eleven-Year Summary for Silvicultural Statistics for  
10                   Canada and I think you should have that in front of you  
11                   to deal with my question.

12                   MR. GALLOWAY: A. Yes.

13                   Q. Now, if you go to the last page we  
14                   have Table 16. And you agreed that on page 16 the  
15                   document indicates that in Ontario -- or that Ontario  
16                   attains success rates of 50 per cent and 46 per cent  
17                   for naturally regenerated stands of spruce and pine  
18                   respectively.

19                   Mr. Castrilli then posed -- after he  
20                   established that, he posed the following proposition to  
21                   you and I think I have it down fairly accurately. He  
22                   said:

23                   "If you can obtain the success rates with  
24                   natural regeneration..."

25 Referring to those success rates that we just looked

1 at:

2 "If you can obtain those success rates  
3 with natural regeneration when there is  
4 little or no herbicide, it's not  
5 necessary to plant and spray."

6 And your response was:

7 "Natural regeneration treatment will be  
8 used and is successful there because  
9 sites were the type where you expected  
10 those results."

11 What did you mean by that, I didn't --

12 A. Yes, that the summary of natural  
13 regeneration success is a summary of success on those  
14 sites where it was prescribed. So on other sites,  
15 these success numbers would not be reflective for  
16 natural regeneration.

17 Q. Thank you. By the way, Mr. Galloway,  
18 Mr. Castrilli's question assumed that the naturally  
19 regenerated areas being reported in Table 16 did not  
20 severe a herbicide treatment.

21 Now, in the material that he supplied -  
22 there was only three pages that he supplied - is there  
23 any indication whether the stands being referred to did  
24 or did not receive a herbicide treatment, or a tending  
25 treatment of any kind, for that matter?

1                   A. Yes, there is. You would have to  
2 give me a moment to find the exact location of it.

3                   Q. You are looking at Exhibit 677, Mr.  
4 Galloway?

5                   A. Yes.

6                   Q. Fine. I can tell you, I didn't find  
7 any reference.

8                   A. I guess I was referring to the first  
9 paragraph above the stand ending paragraph, and it  
10 refers to site preparation only. So that site  
11 preparation might occur on natural regeneration areas,  
12 that is correct, not tending.

13                  Q. And no indication whether, with or  
14 without site preparation, included herbicides -- there  
15 is no indication that it did or didn't?

16                  A. That's correct.

17                  Q. And there's no indication what -- Mr.  
18 Champion, a few questions for you. The first one  
19 regarding Exhibit 643A -- pardon me, 643, not 643A.

20                  DR. CAMPBELL: A. I have got it.

21                  Q. Oh, I'm sorry, it is 643A I am  
22 advised.

23                  A. I have 643. You have got the extra  
24 attachment for 633A.

25                  Q. All right. And I am not -- well, in

1 643A, I think if you look at page 2 there is a  
2 statement about the amount of berries that people can  
3 consume?

4 A. Oh yes, right.

5 Q. All right. Is that where it says:  
6 "An average-sized person would have to  
7 consume..."

8 Is that the way it starts?

9 A. That's correct.

10 Q. All right. Let me just read to you  
11 what my notes indicate that it states on page 2. It  
12 says that:

13 "An averaged-size person..."

14 150 pounds if we convert to kilograms:

15 "...would have to consume more than 1.9  
16 kg of berries every day in order to  
17 exceed the ADI of .3 mg per kg body  
18 weight per day."

19 A. Yes.

20 Q. What's ADI?

21 A. ADI is what they refer to as the  
22 allowable daily intake, and this is the figure which  
23 regulatory agencies, in this particular case the World  
24 Health Organization, has determined is the amount which  
25 would be safe for an individual to consume on a daily

1 basis, essentially every day for the rest of his life.

2 Q. And --

3 A. And that figure is based on -- is  
4 expressed in terms of mg per kg of body weight. So  
5 that is the reason why you can use the same ADI,  
6 whether you are talking about a child or a very large  
7 adult.

8 Q. And 1.9 kilograms is 4.2 pounds?

9 A. That's right. And that's assuming  
10 that a person would be eating that every day.

11 Q. For the rest of their life?

12 A. That's correct.

13 Q. Thank you. Mr. Campbell, again  
14 dealing with -- or some questions regarding the use of  
15 2,4-D in forestry and by homeowners?

16 A. Yes.

17 Q. Mr. Castrilli asked if homeowners  
18 aerially spray their homes and your answer was no?

19 How does exposure of humans to 2,4-D  
20 compare when, on the one hand you are looking at  
21 applying it aerially for forestry purposes and, on the  
22 other hand, you are looking at it being applied by  
23 householders?

24 A. Well, there are a number of  
25 differences, of course. Obviously in our aerial

1 application scenario we are doing it generally in  
2 remote areas, we have the areas closed to the public at  
3 the time of spraying. The people who are involved, the  
4 workers, are highly trained and are wearing protective  
5 gear.

6 In the case of homeowners, there is  
7 absolutely no requirement for any type of training.  
8 The only precautions would be the standard boiler plate  
9 which is on any pesticide label: avoid contact with  
10 the skin, don't drink it, this type of thing.

11 There is also no requirement that  
12 people -- people don't post areas, so obviously if a  
13 homeowner sprays his lawn, people could walk over the  
14 lawn, lie down and roll in it, you know.

15 Having said that, of course, I mean there  
16 are also studies which indicate that the amount of  
17 2,4-D which could be dislodged to represent exposure is  
18 very low.

19 THE CHAIRMAN: Dr. Campbell, is there any  
20 requirement under the existing legislation for  
21 commercial operators in urban areas who apply chemicals  
22 to residences -- to lawns for residences to post any  
23 signs saying that there has been an application?

24 DR. CAMPBELL: At the present time there  
25 isn't. There is a proposal by the -- under the Ontario

1 Pesticides Act to require posting under certain  
2 circumstances, and I don't have it here so I can't  
3 mention the specific details.

4 THE CHAIRMAN: Thank you.

5 DR. CAMPBELL: Those commercial people of  
6 course do have to be licensed and trained as opposed,  
7 again, the homeowners.

8 MR. FREIDIN: Q. Mr. Galloway, there was  
9 evidence yesterday or there was evidence in  
10 cross-examination I think both of you and Mr. Iskra  
11 about the cost of applying 2,4-D and glyphosate per  
12 hectare?

13 MR. GALLOWAY: A. Yes.

14 Q. There was that figure of \$40 per  
15 hectare for 2,4-D and then you indicated that the range  
16 would be \$30 to \$60 but the average would be \$40?

17 A. Yes.

18 Q. And is that \$40 an all-inclusive  
19 figure or what things aren't included in that \$40?

20 A. The only items that would not be  
21 included in that is salary of permanent employees,  
22 that's just billed generally, preparation time to draw  
23 up the contract and the administration-type items like  
24 that. Other than that, basically all other items would  
25 be charged in that cost.

1                   Q. All right. Now, I appreciate that it  
2                   is difficult for someone who is not familiar with the  
3                   topic and who is trying to record or report what  
4                   happens.

5                   A statement -- I just you want to confirm  
6                   whether in fact this statement is accurate or not, that  
7                   herbicide costs, 2,4-D of \$40 per hectare and  
8                   glyphosate at \$135 per hectare, do not include such  
9                   application costs as airplane contracts, fueling and  
10                  ground support?

11                  A. No, that's incorrect, those are  
12                  definitely within the costs.

13                  Q. Thank you. Mr. Churcher, in  
14                  cross-examination by Ms. Seaborn she suggested that BT  
15                  was more target-specific than chemical insecticides and  
16                  you agreed.

17                  MR. CHURCHER: A. Yes, I believe she  
18                  qualified that as saying target-specific; i.e., insects  
19                  belonging to the order lepidoptera, moths and  
20                  butterflies.

21                  Q. Right. Now, is the fact that BT is  
22                  more target-specific considered to be beneficial?

23                  A. Yes, that's one of the advantages of  
24                  using BT.

25                  Q. Why is that a benefit?

1                           A. Well, in the fact that it is  
2 target-specific or it has a narrower range of insects  
3 that it will affect as opposed to chemical  
4 insecticides, some of which may be a more broad range  
5 or may have impacts on other insects of other orders  
6 besides just the one that you are trying to control.

7                           Q. Now, Dr. Campbell, does the same  
8 principle apply to herbicides?

9                           DR. CAMPBELL: A. I'm sorry, you are  
10 going to have to repeat it, I was daydreaming.

11                           Q. All right. You are also very honest.

12                           THE CHAIRMAN: And it's the first  
13 admission of that we have had in this entire hearing.

14                           MS. MURPHY: It's the first day of summer  
15 too, I think.

16                           MR. FREIDIN: I will have something to  
17 say about that later, too.

18                           Q. Mr. Church indicated just a moment  
19 ago that it is a beneficial characteristic of BT that  
20 it is more target-specific than perhaps chemicals in  
21 that when you use BT you get the species lepidopterus,  
22 caterpillars?

23                           MR. CHURCHER: A. Very good.

24                           Q. Caterpillars, and you don't affect a  
25 whole bunch of other insects that you aren't really

1       attempting to control. And he said that was a benefit  
2       of using BT or being target-specific. I am asking you:  
3       Does the same principle apply to herbicides?

4                   DR. CAMPBELL: A. Certainly it does and  
5       this was the point that we had discussed when we were  
6       talking about the herbicides, the advantage of using  
7       the appropriate herbicide for the particular situation.

8                   One of the examples being the case where  
9       you perhaps wanted to keep aspen in a stand which you  
10      were tending, a certain component of it. Using 2,4-D  
11      would be a more appropriate choice in that case.

12                  Q. Okay. Now, you gave evidence that if  
13      you had more herbicides registered for forestry use in  
14      Ontario you would be able to use more finesse when  
15      using herbicides.

16                  And you explained that by saying: With  
17      more registered herbicides, you would be able to use a  
18      minimum amount of herbicides and target the species  
19      that you wanted to control.

20                  I guess basically that's what you have  
21      just described?

22                  A. Yes, that's correct.

23                  Q. Now, would having such additional  
24      target-specific herbicides have any effect, in your  
25      view, on the amount of the environment - and by that I

1 mean, in this case, the vegetative environment - that  
2 would be affected by the use of herbicides?

3 A. Well, yes, because if you have --  
4 again, each herbicide has a specific range of species  
5 it affects.

6 If you take the herbicide which is most  
7 effective for the species that you are particularly  
8 attempting to control, then you can probably use a  
9 lower rate of the chemical and you will have less  
10 effect on other species.

11 You don't have obviously the same degree  
12 of specificity that you do with BT in terms of insects,  
13 but still you do narrow the range considerably.

14 Q. Thank you. This is a question for  
15 you, Dr. Campbell. Ms. Seaborn asked Mr. Nicholson  
16 with respect to the permitting system for forestry  
17 purposes whether there were any use patterns for  
18 application to waterbodies, and he said: Well, not in  
19 forestry.

20 My question for you is: Do any of the  
21 products discussed by this panel have any normal use  
22 patterns for application to water?

23 A. Yes, in fact they do. 2,4-D is  
24 registered for the control of aquatic weeds, and a  
25 matter of interest the application rate is

1 approximately ten times the maximum rate which we would  
2 use in forestry. Simazine is also registered for the  
3 control of aquatic weeds.

4 Q. And if 2,4-D gets into a watercourse  
5 as a result of forestry it would be by a drift beyond a  
6 buffer?

7 A. That's correct. So the amount which  
8 could conceivably get in during a forestry application  
9 would be lower again than even our normal application  
10 rate, which we say is far below what would be  
11 registered for aquatic weed control.

12 THE CHAIRMAN: Dr. Campbell, where 2,4-D,  
13 as an example, is used for the control of aquatic  
14 weeds, what you I think mentioned, ten times the rate  
15 as it is used in a forest application, has that been  
16 approved in terms of water quality effects by the  
17 Ministry of the Environment for that aquatic use?

18 DR. CAMPBELL: I can't speak to that  
19 specifically. However, any such applications -- each  
20 individual application requires a permit from the  
21 Minister of the Environment.

22 THE CHAIRMAN: Are you aware of any such  
23 permits having been issued?

24 DR. CAMPBELL: I believe they are. I  
25 have no specific information.

1 MR. BUSS: In the area of the  
2 undertaking?

3 THE CHAIRMAN: Yes.

4 MR. BUSS: I'm not sure there, but I  
5 think they are given in the area of the Kawartha Lakes  
6 area where they have some tremendous aquatic weed  
7 problems.

16 THE CHAIRMAN: Thank you.

17 DR. CAMPBELL: Certainly the Ministry of  
18 the Environment was actively engaged in some of the  
19 research that led up to the registration of these use  
20 patterns some years back.

21 THE CHAIRMAN: Thank you.

22 MR. FREIDIN: Mr. Chairman, those are the  
23 questions that I would like to ask on re-examination,  
24 but there is another matter that I would like to  
25 address at this moment of a little lighter nature.

1 As Ms. Murphy indicated, it is the first  
2 day of summer. I think a lot of us are eagerly  
3 anticipating the end of the month so we can start our  
4 summer break.

9 Now, there has been, with only a few  
10 exceptions, a very good working relationship with the  
11 parties and counsel and I think that's something that  
12 we can all be proud of.

13                           But I should advise you that today I have  
14                           an opportunity to both provide a lighter moment and to  
15                           cause a contribution of at least \$100 to be made to the  
16                           Heart and Stroke Fund.

17 MS. MURPHY: Perhaps the Stroke Fund.

18 MR. FREIDIN: Well, the Stroke Fund, I  
19 may be the first recipient of the hundred dollars.

20 Now, in the past, Mr. Chairman, I have  
21 sung at these hearings and I must say without, I might  
22 add, an environmental assessment which is usually  
23 necessary for noise-causing undertakings by government.

24 MS. CRONK: Let's get on it with it.

25 MR. FREIDIN: Even though it may be

1 through someone retained by the government.

2 THE CHAIRMAN: In order for this donation  
3 to be made, is it necessary for the Board to remain  
4 present?

5 MR. FREIDIN: Absolutely. Now --

6 MR. CHURCHER: Those were part of the  
7 terms and conditions.

8 MR. FREIDIN: Now, let me finish this, I  
9 prepared this.

10 Now, when I sang to Mr. Hynard I did not  
11 intend to be disrespectful to the Board or the process  
12 in any way, and I don't believe my actions were seen as  
13 being disrespectful in any way, Mr. Chairman.

14 And assuming that I am correct, I would  
15 like to ask for the indulgence of the Board once again  
16 to, as I have said, allow me to provide a lighter  
17 moment and, more importantly, to facilitate a donation  
18 of the magnitude and the type that I have described.

19 THE CHAIRMAN: Well, in the interest of  
20 charity, solely.

21 MS. CRONK: I would like to say something  
22 about cruel and unusual punishment.

23 THE CHAIRMAN: We will close our eyes and  
24 swallow hard.

25 MR. FREIDIN: Well, Mr. Chairman, the

1       song that I would like to sing, I had great concern  
2       about what it was going to be because the song which  
3       had been suggested to me by someone, who will remain  
4       nameless, was one that I didn't know the words to  
5       except for the opening few lines.

6                   And this morning, I must say, that I was  
7       almost more concerned with the words to the song than I  
8       was with the re-examination.

9                   So what I did is, I decided that I would  
10      compose my only little song, a song which is in the  
11      nature of re-examination.

12                  THE CHAIRMAN: Are we allowed to give a  
13      weighting to your re-examination in light of what is  
14      about to come?

15                  MR. FREIDIN: Well, Mr. Chairman, I think  
16      that the onus on you is going to be much more -- much  
17      greater than that because this is a question in the  
18      nature of re-examination which is being posed to you  
19      and I would like to ask for your answer when I am  
20      finished.

21                  And so the little song goes - and I do  
22      apologize for all the notes I am going to sing off  
23      key - and my question for you, Mr. Chairman, is as  
24      follows:

25

1                   Michael, Michael, give me your answer  
2                   true:

3                   Will you be real happy when the whole  
4                   case is through?

5                   There won't be a speedy ending, but no  
6                   one will we be offending,

7                   If we move along fast, so the hearings  
8                   won't last, until we are all 92!

9

10                  (applause)

11                  MR. FREIDIN: And the answer, Mr.  
12                  Chairman?

13                  MS. CRONK: I think if you require  
14                  independent counsel, sir, I think it's appropriate...

15                  THE CHAIRMAN: I think we will take it  
16                  under advisement, and I don't think we will put an  
17                  answer on the record.

18                  I take it that this undertaking of yours  
19                  having been completed, the money will be forthcoming  
20                  and that the appropriate charity will benefit?

21                  MR. FREIDIN: That is correct. I think I  
22                  have named the charity.

23                  I must advise, I had commitments which  
24                  allowed me to make the comment as to the minimum amount  
25                  and, of course, if anyone wants to add to that

1 contribution, I am sure the Heart and Stroke Fund would  
2 be most appreciative.

3 MR. HYNARD: Just to reiterate, Mr.  
4 Freidin's words from yesterday, I would rather listen  
5 to a forester.

6 MR. FREIDIN: Well, Mr. Hynard, if you  
7 want to sing, we will listen.

8 I have nothing further, Mr. Chairman.  
9 Thank you.

10 THE CHAIRMAN: Okay. Thank you,  
11 everyone.

12 We will adjourn now until Monday at 1:00  
13 p.m. Although we would like an indication how long you  
14 might be next week in terms of the  
15 examination-in-chief?

16 MR. FREIDIN: Two and a half. So it is  
17 between two and three days.

18 THE CHAIRMAN: Okay. So we will finish  
19 definitely by Thursday?

20 MR. FREIDIN: We have every intention of  
21 finishing next week. I mean, if we go over into  
22 Thursday, it will be unexpected, so we hope we will  
23 definitely anticipate finishing next week.

24 THE CHAIRMAN: Okay. Very well.

25 Ms. Cronk, do you have something further?

1 MS. CRONK: Yes, Mr. Chairman.

2 I wonder if Mr. Freidin or Ms. Murphy are  
3 in a position to assist us, if they can, as to what  
4 they anticipate the line-up of witnesses will be from  
5 and after August 8th.

6 As you will appreciate, some of us won't  
7 be here next week and we have experts to make  
8 arrangements with so they can be in attendance for the  
9 continuation of the evidence on this panel.

10 THE CHAIRMAN: Okay. And I think the  
11 Board would also like an indication as to when the  
12 experts will be called with respect to the effects of  
13 pesticides on human health and confirmation that the  
14 experts will be called together.

15 MS. MURPHY: Yes. I understand that  
16 that's a matter of interest. I haven't had an  
17 opportunity to spend any time in the office in the last  
18 little while, now obviously I can, and I hope to be  
19 able to advise certainly before the Board rises for the  
20 break.

21 THE CHAIRMAN: Okay.

22 MS. CRONK: Sorry, sir. Can I at least  
23 know whether during the week of August 8th it is  
24 intended that one or more of the remaining witnesses on  
25 protection are going to be called, or is it intended by

1 MNR that we are going to continue with the roads  
2 evidence?

3 MS. MURPHY: Oh, yes. The situation is  
4 that starting August 8th there will at least obviously  
5 be Mr. Kingsbury. We would be going back to Panel  
6 13 -- Panel 12 and 13, given that we had to deal with  
7 Kingsbury in August. So it would not be  
8 cross-examination.

9 THE CHAIRMAN: Well, okay, but we are  
10 back into the issue of dealing with Dr. Kingsbury and  
11 Mr. -- is it Dr. or Mr.?

12 MS. MURPHY: Dr. Ritter.

13 THE CHAIRMAN: Ritter. Once again, the  
14 Board feels those two witnesses should be heard  
15 together. If one or the other is not available, then  
16 we would suggest the Ministry seriously contemplate  
17 rescheduling them so that they can be heard together.

18 MS. MURPHY: Again, it is difficult to  
19 deal with the matter right now until I have had an  
20 opportunity to talk to them.

21 THE CHAIRMAN: Okay. Well, I guess, Ms.  
22 Cronk, we can't definitively give an answer to that  
23 until probably at least next week--

24 MS. CRONK: Thank you, Mr. Chairman.

25 THE CHAIRMAN: --as far as the

1 scheduling.

2 I might remind the parties, however,  
3 there are a few procedural matters that we will be  
4 dealing with on August 8th as well.

5 Perhaps some of the parties can help us  
6 out. We thought there was some sort of deadline,  
7 perhaps it was just the statement of issues that had to  
8 be filed by August 8th; is that correct?

9 MR. FREIDIN: Panel 15.

10 MS. MURPHY: I believe it was the Panel  
11 15 statement of issues, I think was the one thing that  
12 was slated for that day.

13 THE CHAIRMAN: All right. Well, the  
14 scoping session would probably take place later that  
15 week for that panel.

16 Thank you.

17 ---Whereupon the hearing adjourned at 12:20 p.m., to be  
18 reconvened on Monday, June 26th, 1989, commencing at  
1:00 p.m.

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